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THE POLAR REGIONS

of the

WESTERN CONTINENT



EXPLORED;

BY

WILL^M J. SNELLING.

BOSTON 1831.

Printed by W. P. Rogers.



THE
POLAR REGIONS
OF THE
WESTERN CONTINENT EXPLORED ;
EMBRACING A
GEOGRAPHICAL ACCOUNT

OF
ICELAND, GREENLAND, THE ISLANDS OF THE FROZEN SEA,
AND THE
NORTHERN PARTS OF THE AMERICAN CONTINENT,
INCLUDING
A PARTICULAR DESCRIPTION OF THE COUNTRIES, THE SEAS, IN-
HABITANTS, AND ANIMALS OF THOSE PARTS OF THE WORLD ;
ALSO, A MINUTE ACCOUNT OF THE WHALE FISHERIES,
AND THE DANGERS ATTENDING THEM ;
WITH REMARKABLE ADVENTURES OF SOME OF THE WHALE FISHERS,
DESCRIPTIONS OF MOUNT HECLA, AND THE OTHER
VOLCANOES OF ICELAND ;



Together with the
ADVENTURES, DISCOVERIES, DANGERS AND TRIALS
OF
PARRY, FRANKLIN, LYON, AND OTHER NAVIGATORS,
IN THOSE REGIONS.

BY **W. J. SNELLING,**
AUTHOR OF 'TALES OF THE NORTHWEST.'

ILLUSTRATED BY A MAP AND ENGRAVINGS.

BOSTON :
PRINTED FOR W. W. REED.

1831.

DISTRICT OF MASSACHUSETTS—TO WIT :

District Clerk's Office.

BE IT REMEMBERED, That on the fourteenth day of January, A. D. 1831, in the Fifty-fifth year of the Independence of the United States of America, Samuel G. Goodrich, of the said District, has deposited in this Office the Title of a Book, the Right whereof he claims as proprietor, in the words following, to wit:

“The Polar Regions of the Western Continent explored, embracing a geographical account of Iceland, Greenland, the Islands of the Frozen Sea, and the northern parts of the American Continent, including a particular description of the Countries, the Seas, Inhabitants, and Animals of those parts of the world; also a Minute Account of the Whale Fisheries, and the dangers attending them; with remarkable adventures of some of the whale fishers, descriptions of Mount Hecla, and the other volcanoes of Iceland; together with the adventures, discoveries, dangers and trials of Parry, Franklin, Lyon and other navigators, in those regions. By W. J. Snelling, author of “Tales of the Northwest,” illustrated by a Map and Engravings.”

In conformity to the Act of the Congress of the United States, entitled “An Act for the encouragement of learning, by securing the copies of Maps, Charts and Books, to the authors and proprietors of such copies, during the times therein mentioned:” and also to an Act entitled “An Act supplementary to an Act, entitled, an Act for the encouragement of learning, by securing the copies of Maps, Charts and Books to the authors and proprietors of such copies during the times therein mentioned; and extending the benefits thereof to the arts of designing, engraving and etching historical and other prints.”

JNO. W. DAVIS, *Clerk of the District of Massachusetts.*

P R E F A C E .

LONG prefaces are seldom read, and therefore the author, or rather compiler, of the following pages will confine his remarks to an explanation of the plan and scope of his work.

The data from which our knowledge of the northern regions is derived are already before the world. Crantz has made us acquainted with Greenland, Parry with the northeastern coast of this continent, and Franklin with the interior. Yet the results of their labors are preserved in a form which precludes the majority of readers from profiting by their observations. The voyages of Captain Parry, for example, as they have heretofore been published, fill several large volumes, and the same may be said of the travels of Captain Franklin and his coadjutors.

The object of this work, therefore, is, as its title implies, to give the reader a condensed account of what is known of the northern regions of the new world, from the latest and best authorities. To this end the compiler has availed himself of the writings of Henderson, Crantz, Parry, Franklin, Richardson, Kotzebue, and others, and, in many instances, has used their very words. He does not pretend to say all that may be said, nor to record every adventure of the enterprising travellers; but he trusts that he has omitted nothing essential to a knowledge of the regions he describes, as far as they are known. Whatever has appeared to him worthy of commemoration, he has set down; but unimportant details have been omitted.

Whether the task prescribed in these premises has been well or ill performed, it is certain that no work on this plan, or undertaken with the same object, has yet appeared. Such as the book is, it is now presented to those by whom it must be judged.

C O N T E N T S .

I C E L A N D .

CHAPTER I.

Of the Geographical Situation of Iceland.—Its Discovery and Colonization.—Patriarchal Government of the early Settlers.—The Icelandic Republic.—Its Government.—Code of Ulflot.—Code of Bergthor.—The Jonsbok.—Conversion of the Icelanders.—Subjugation of Iceland to Norway.—Legal Punishments.—Present Government of Iceland.—Attempted Revolution in 1805. - - - - - Page 1

CHAPTER II.

Geologic Character of Iceland.—Volcanoes and Ice Mountains.—Mount Hecla.—Eruption of Skaptar Yokul.—Its Consequences.—Skaptar Yokul. 9

CHAPTER III.

Situation of the Geysers.—Description of the Great Geyser.—Its Eruption.—The Strochr.—The Old Strochr.—The little Geyser.—Hot springs at various Places.—Mountains.—Oræfa Yokul.—Crater of Krabla. - 17

CHAPTER IV.

The cave of Surtshellir.—Towns and Settlements. Reykiavik Videy.—Druidical Circle at Thingvalla.—Holum.—Akur Egri.—Population of Iceland.—Religion and Form of Church Government.—Clergy.—Education.—School at Bessastad.—Icelandic Literature.—Runic Poetry.—Death Song of Regner Lodbrok. - - - - - 24

CHAPTER V.

Personal Appearance of the Icelanders.—Character, Language, and Literature.—Dress of the Males.—Dress of the Females. - - - 34

CHAPTER VI.

Cold in Iceland.—Polar Ice.—Winter.—Summer.—The Fishery.—Summer, Occupation of the Icelanders.—Occupation of the Women.—Treatment of Strangers.—Pastoral Life.—Houses of the Icelanders.—A Winter Evening in Iceland.—Horses.—Reindeer.—Visit to the Trading Houses.—Exports and Imports. - - - - - 41

CHAPTER VII.

Miscellaneous Particulars.—Of the Mineral Kingdom in Iceland.—Vegetables.—Drift Wood.—Sketch of Spitzbergen. - - - 50

GREENLAND.

CHAPTER I.

General Geographic Features of the Coast of Greenland.—Of the Western Coast.—Of the Eastern Coast.—Fredericsshaab.—The Ice Blink.—Gothaab Disko Bay.—Lievely. - - - - - 57

CHAPTER II.

Of the Polar Ice.—Changes in its Position.—Its present Position.—Technical Names of the different Kinds of Ice.—Dangers from Icebergs.—Manner of taking the Whale. - - - - - 65

CHAPTER III.

Early History of the Whale Fishery.—Of the Manner in which a Whale Ship is manned.—The Crow's Nest.—Whale Boats.—Implements used in the Whale Fishery.—Whale Killing.—Danger of Striking. - 77

CHAPTER IV.

Farther Account of Whale Killing.—Length of Time required to kill a Whale.—Character of the Whalemén.—Anecdotes of the Greenland Fishery. 82

CHAPTER V.

Account of the Discovery of Greenland.—Early History.—America discovered by Icelanders.—Greenlandic Colony in America.—First Appearance of the Esquimaux.—Black Death and Loss of Greenland.—Attempts at Rediscovery and Recolonization.—Greenland recolonized by Hans Egede. 89

CHAPTER VI.

Climate of Greenland.—Seasons and Weather.—Length of Days and Nights.—Flora of Greenland.—Greenlandic Gardens.—General Remarks.—Voyage of Captain Ross. - - - - - 96

CHAPTER VII.

Of the Uskees, or Aboriginal Inhabitants of Greenland.—Their physical Characteristics.—Dress.—Their Relations with other Tribes.—Progress in Religion and Civilization.—Intercourse with Europeans.—Knowledge in Trade.—Form of Society. - - - - - 104

CHAPTER VIII.

Occupations of the Uskees.—Uses of the Whale.—Manner of spending the Winter.—Manner of spending the Summer.—Manner of catching Seals.—Enjoyments of the Uskees.—Language. - - - - - 111

CAPTAIN PARRY'S FIRST VOYAGE.

CHAPTER I.

Object of Parry's First Voyage.—Equipment of the Expedition.—Passage up Davis's Straits.—Embarrassment in the Ice. - - - 119

CHAPTER II.

Farther Detention in the Ice.—Whales.—Arrival at Lancaster's Sound.—Land about Possession Bay.—New Lands discovered.—The Vessels are again stopped by the Ice. - - - 129

CHAPTER III.

Cape Seppings discovered.—Near Approach to the Magnetic Pole.—Unfavorable Position of the Ice.—Appearance of Prince Regent's Inlet.—Port Bowen. - - - 136

CHAPTER IV.

Appearance of the Land about Jackson's Bay.—Favorable Prospect to the Westward.—Gascoyne's Inlet discovered.—Farther Discoveries.—Barrow's Strait. - - - 144

CHAPTER V.

Further Progress of the Expedition.—New Discoveries.—Bathurst's Island.—Novel Expedient in Navigation. - - - 148

CHAPTER VI.

Some Description of the Shores of Melville Island.—The Ships' Companies win the Premium for penetrating to Longitude 110° West from Greenwich.—Bay of the Hecla and Griper.—Farther Proceedings.—Loss and Sufferings of a Hunting Party. - - - 155

CHAPTER VII.

The Ships return to the Bay of the Hecla and Griper, and take up a Position for the Winter.—Proceedings at Winter Harbor.—Internal Arrangements of the Ships. - - - 161

CHAPTER VIII.

Mode of serving out Provisions and Fuel.—Theatre.—Weekly Newspaper.—Emigration of the Reindeer.—A White Bear.—Intense Cold. 168

CHAPTER IX.

Opening of the Theatre.—Wolves and White Foxes.—Measures to obviate the Effects of the Cold.—Mode of Passing the Time. 175

CHAPTER X.

Scenery of Winter Harbour.—Optical Deception.—Employments of Officers and Men.—Theatrical Entertainments.—Night and Day. 180

CHAPTER XI.

Christmas.—Scurvy breaks out on board the Hecla.—Extreme Cold.—The Sun seen.—Conflagration on Shore.—Extraordinary Accumulation of Vapor.—Sudden Change of Weather. - - - 187

CHAPTER XII.

Return of the Migratory Animals to Melville Island.—Snow Blindness.—The Hecla freed from the Ice.—Gardening.—Journey to explore Melville Island. - - - - - 193

CHAPTER XIII.

Progress of the Season.—State of the Ice.—Damage received by the Rudders of the Ships. - - - - - 199

CHAPTER XIV.

A Boat passes between the Ships and the Shore.—Maximum Heat at Melville Island.—The Vessels are made ready for Departure.—They weigh Anchor.—Departure from Winter Harbour.—Are stopped by the Ice.—Description of a Part of the Shore. - - - 205

CHAPTER XV.

Dangerous Position of the Hecla.—Submarine Ice.—Curious Wall.—Danger of the Griper.—A Whale seen.—Discovery of Banks's Land.—Detention by the Ice.—A Musk-Ox killed.—The Ice closes on the Shore. - - - - - 212

CHAPTER XVI.

Average Thickness of the Ice.—Observations on the State of the Ice.—Farther Detention.—Appearances of this Part of Melville Island.—Great Peril of the Griper.—The Griper ordered to retrograde. 219

CHAPTER XVII.

The Hecla moves again.—Position of the Ships.—They move to the Eastward.—Abandonment of the Westward Course.—Musk Oxen.—Retrograde Passage. - - - - - 224

CHAPTER XVII.

The Ships explore the West Shore of Baffin's Bay.—Meet Vessels from England.—Esquimaux at the river Clyde.—Their Behaviour. - - - 230

CHAPTER XVIII.

Intercourse with the Esquimaux.—Manner of Embarking and Disembarking in Canoes.—Esquimaux Tents.—Mode of Barter.—Stature and Appearance of the Esquimaux - - - - - 236

CONTENTS.

ix

CHAPTER XIX.

Dress of the Esquimaux.—Description of their Tents.—Description of their Canoes.—Implements used in the Fishery.—Their Sledges.—Esquimaux Dogs.—Their Voracity.—Household Economy. - - 244

CHAPTER XX.

Farther Particulars respecting the Esquimaux.—Their Number.—Health.—Demeanour.—Return of the Expedition to England. - 250

CAPTAIN PARRY'S SECOND VOYAGE.

CHAPTER I.

The Hecla and Fury fitted out.—They reach Davis's Strait.—Difficulties in the Ice.—The Ships are visited by Esquimaux.—Their Behaviour. 254

CHAPTER II.

Offensive Conduct of the Esquimaux.—Description of the Savage Islands.—Ships make the Coast of Labrador.—More Esquimaux. - 260

CHAPTER III.

The Ships make the Northern Land, Southampton Island, Frozen Strait.—The Ice begins to make.—The Ship gets into Winter Quarters.—Shrimps.—Foxes.—A Theatre is opened.—The Northern Lights. - - 263

CHAPTER IV.

Repulse Bay.—Frozen Strait.—Captain Lyon makes a Journey.—Appearance of the Coast.—Interview with a Party of Esquimaux. - - 269

CHAPTER V.

Ice begins to make.—The Ships get into Winter Quarters.—Shrimps.—Foxes.—A Theatre opened.—Northern Lights.—Esquimaux. - - 278

CHAPTER VI.

The Esquimaux visit the Ships.—Wolves.—More Particulars relating to the Esquimaux.—Manner of constructing Snow Huts. - - 285

CHAPTER VII.

Esquimaux.—Musical Concert.—An Esquimaux whipped for Theft.—Starvation.—Captain Parry accompanies a Sealing Party. - - 294

CHAPTER VIII.

Danger of the Seal Hunters.—A Seal Hole.—Manner of Watching Seal Holes.—Manner of Catching Seals and Walrusses.—Another Instance of Theft.—Ferocity of the Wolf.—Esquimaux Dwellings.—Seals killed.—Seal Butchery.—Seals, - - - 300

CHAPTER IX.

Health of the Esquimaux.—Their envious Disposition.—Captain Lyon's Journey.—Removal of Esquimaux, &c.—Captain Parry lodges with the Savages. - - - - - 307

CHAPTER X.

Particulars respecting the Esquimaux.—Dissection of the Seal.—Preparations for Departure.—Behaviour of a sick Savage. - - - 313

CHAPTER XI.

Captain Lyon's Journey.—Departure of the Esquimaux.—Progress of the Season.—The Ships put to Sea.—Description of Winter Island.—Cataract on Barrow's River.—Walrusses killed.—The Ships reach Igloodlik.—Igloodlik and other Islands.—Strait of the Fury and Hecla. 319

CHAPTER XII.

Physical Character of the Esquimaux.—Costume.—Female Avocations.—Sledges, Dogs, Weapons, &c.—Manner of killing Deer and Musk Oxen. - - - - - 329

CHAPTER XIII.

Travelling.—Marriages.—Treatment of Children.—Theology.—Honesty.—Beggary.—Ingratitude.—Hospitality.—Lying and Slander.—Courage.—The Ships return to England. - - - - - 336

CAPTAIN PARRY'S THIRD VOYAGE.

The Ships leave England, and arrive at Disko Island.—The Ice crossed.—Arrival at Lancaster's Sound.—Port Bowen.—Aurora Borealis.—Animals.—Farther Proceedings.—The Fury wrecked.—Return to England. - - - - - 343

CAPTAIN FRANKLIN'S TRAVELS.

CHAPTER I.

Object of Captain Franklin's Journey.—His Instructions.—Captain Franklin arrives at Hudson's Bay.—York Factory.—Swampy Creeks.—Departure from York Factory.—Tracking.—Indian Anecdote.—Steel River.—Route of the party up the Hill River.—Arrival at Lake Winnipeg. - 350

CONTENTS.

xi

CHAPTER II.

The Saskatchewan.—Arrival at Cumberland House.—Sufferings of the Indians.—First of January.—Bois Brûlés.—Departure of Captain Franklin.—Cumberland House.—Vegetable Kingdom.—Animals.—The Naheewak. 358

CHAPTER III.

Snow Shoes.—Dog Sledges.—Travelling Dress.—Mal a Raquette.—Pemican.—Sagacity of Wolves.—Arrival at Carlton House.—Assiniboins.—Their War Parties.—Dressing Skins.—A Pound for catching Buffaloes. 367

CHAPTER IV.

Running the Buffalo.—Still Hunting.—Carlton House.—Goitres.—A Dead Body.—Isle a la Crosse.—Buffalo Lake.—Pierre au Calumet.—Arrival at Fort Chippewyan.—Return of Spring. 377

CHAPTER V.

News from Great Slave Lake.—Voyageurs engaged.—Fort Chippewyan.—Lake of the Hills.—Chippewyan Tribe.—Their Dress.—Character.—Vanity.—Opinions.—Customs.—Abandonment of their Sick.—A Birch Canoe. 385

CHAPTER VI.

An Accident.—Arrival of Dr Richardson.—Arrangements for Departure.—Departure.—Portages.—A Buffalo killed.—The Party arrive at Great Slave Lake.—At Fort Providence.—Conference with Akaitcho. 393

CHAPTER VII.

Akaitcho.—Preparations for the Journey.—Fort Providence.—Journey up Yellow Knife River.—Want of Food.—Yellow Knife River.—Mutiny of the Voyageurs.—The party reach their Winter Quarters.—Conduct of Akaitcho.—Departure of Messrs Back and Hood. 401

CHAPTER VIII.

Trip to the Coppermine.—Fort Enterprise.—Reindeer.—Departure of Messrs Back and Wentzel.—Conduct of the Indians.—Frozen Fishes.—News from Slave Lake.—Green Stockings.—Temperature.—Diet.—Arrival from Slave Lake.—Esquimaux Interpreters. 409

CHAPTER IX.

Message from the Hook.—Conduct of the Interpreters.—Akaitcho.—April.—Suffering of the Indians.—Sliding down Hill.—Advance of the Season.—A Supply of Food.—May Weather.—Arrival of Water-Fowl.—Akaitcho arrives.—His Conduct. 416

CHAPTER X.

Captain Franklin's Reply to Akaitcho.—The Copper Indians.—Keskarrak.—Marriages.—Wars.—Numbers.—The Dog-Ribs.—Their Character.—Residence and Numbers.—The Hare Indians.—The Quarrellers.—Other Tribes.—Behaviour of Akaitcho.—The first Party leaves Fort Enterprise. 423

CHAPTER XI.

Captain Franklin leaves Fort Enterprise.---Sufferings of the Men.---The Coppermine.---Musk Oxen killed.---The Hook.---Portage to Great Bear Lake.---Rapids.---The Copper Mountains.---The Interpreters converse with the Esquimaux.---Flight of the Esquimaux.---The Esquimaux seen again.---An old Savage. - - - - 431

CHAPTER XII.

Terregannuck and his People.---More Esquimaux.---The Copper Indians turn back.---The Party proceed along the Coast, and finally turn back.---Hood's River.---Journey across the Barren Grounds.---Sufferings of the Party.---Tripe de Roche.---The River Anatesy. - - - 438

CHAPTER XIII.

A Musk-Ox killed.---The Party come to a Lake and cross a River.---Danger of Belanger.---They reach Point Lake.---The Canoe left.---They arrive at the Coppermine.---Adventure of Dr Richardson.---Efforts to cross.---Fate of Crédit and Vaillant.---Dr Richardson stops.---Dreadful Sufferings of the Party. - - - - 446

CHAPTER XIV.

Perrault turns back.—Fontano is lost.—Captain Franklin reaches Fort Enterprise.—Misery of the Party.—Dr Richardson and Hepburn reach Fort Enterprise.—The Crimes of Michel.—Murder of Mr Hood.—Michel is put to Death.—Subsequent Progress of Dr Richardson and Hepburn. - - - - 454

CHAPTER XV.

Death of Peltier and Samandré.—Extreme Weakness of the Survivors.—Their Intellects become weak.—Arrival of Indians.—Their Proceedings.—More Indians arrive.—Captain Franklin reaches the Camp of Akaitcho.—Mr Back's Adventures.—Death of Beuparlant.—End of the Journey. - - - - 462

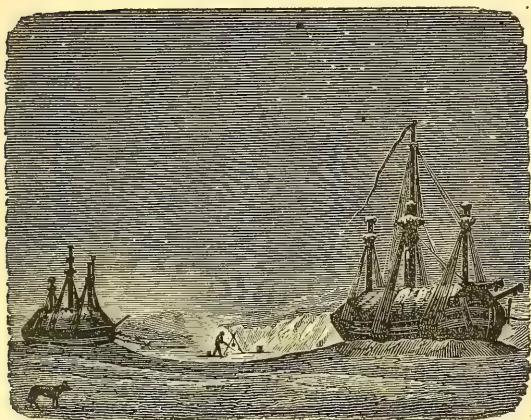
CHAPTER XVII.

Second Journey of Captain Franklin.—Attack by the Esquimaux.—Description of the Esquimaux.—Their Women.—Farther Progress.—The Expedition returns.—Capt. Beechy.—Doctor Richardson's Voyage.—The Esquimaux.—Their Huts.—Observations on the Magnetic Pole. 470

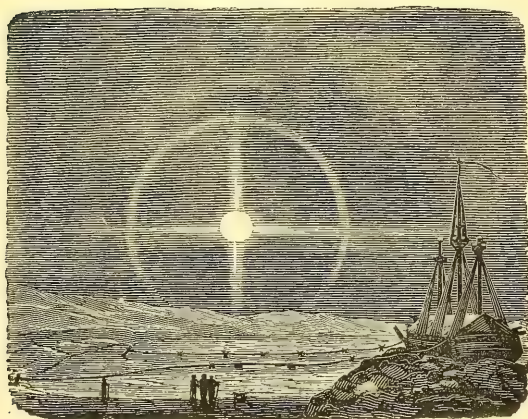
KOTZEBUE'S VOYAGE.

Arrival of Lieut. Kotzebue at Cape Prince of Wales.—Discovery of a fourth Island in the Gwozdeff Group.—Dwellings of the Natives.---Conduct of the Savages.---Appearance of the Land.---The Natives.---Ice-Bergs on Land.---Researches in Kotzebue's Sound.---Advantages of this Discovery. - - - - 478

ILLUSTRATIONS FOR POLAR REGIONS.



Hecla and Griper in Winter Quarters. p. 161.



Singular Appearance of the Moon. p. 189.



ILLUSTRATIONS FOR POLAR REGIONS.



Shooting Harpoon into a Whale.

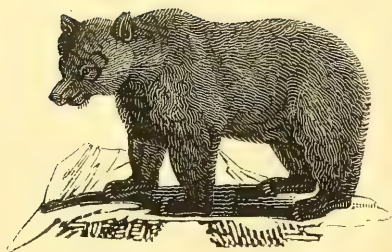


Harpooning a Seal. p. 115.

ILLUSTRATIONS FOR POLAR REGIONS.

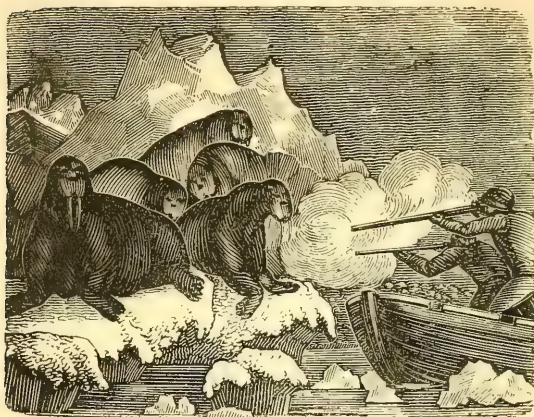


Shooting Polar Bear.



Black Bear.

ILLUSTRATIONS FOR POLAR REGIONS.



Shooting Walrusses.



Indians on the Northwest Coast.

POLAR REGIONS.

CHAPTER I.

Of the Geographical Situation of Iceland.—Its Discovery and Colonization.—Patriarchal Government of the early Settlers.—The Icelandic Republic.—Its Government.—Code of Ulfiot.—Code of Bergthor.—The Jonsbok.—Conversion of the Icelanders.—Subjugation of Iceland to Norway.—Legal Punishments.—Present Government of Iceland.—Attempted Revolution in 1805.

IN compiling a work on the Northern Regions of America, we hope it will not be thought amiss if we begin with Iceland; though that island has been long considered a part of the old world, and was, perhaps, the *Ultima Thule* of the Ancients. Lying as it does, much nearer to Greenland than to any part of Europe, it is without doubt a natural appendage of America. It is also attached to the American Continent by Malte Brun, the highest geographical authority of the present day.

It is situated on the verge of the polar circle, between 63° 24' and 66° 30' of north latitude; and between 13° 15' and 24° 40' of longitude, west from Greenwich. Its length is three hundred, and its

breadth one hundred and fifty miles, nearly ; and it has a superficial area of 40,500 square miles.

The earliest record of the discovery of Iceland which may be considered authentic, is contained in an ancient work in the Runic tongue, called *The Landnamabok*, or *Book of Occupation*. According to this authority, Naddodd, a famous Norwegian pirate, was driven to the shores of Iceland by a storm, about the year 860. He found no inhabitants, nor did he attempt a settlement. It is indeed stated in the *Landnamabok* that the island was previously settled by Christians from the British Isles ; but as they left no traces of their establishments, and as the assertion is not supported by reference, or other authority, it is fair to conclude, that if the British Christians did indeed come thither, they were only occasional visitors.

Four years after, Iceland was again discovered by Gardar Svafarson, a Swede ; who circumnavigated it, and spent the winter on its shores. The account he gave of it on his return, induced Floki, another Norwegian pirate, to attempt a settlement. He sailed from the Faro Islands, and supplied the want of the compass by dismissing ravens from his ship, and directed his course by their flight. He settled at Vænsfiord, but devoting too much of his time to the fisheries, his crops failed, and the cattle he had brought with him died in consequence. He passed the winter on the island, gave it the name of Iceland, or the country of Ice, and then abandoned it forever.

The companions of Floki gave very favorable

accounts of the natural advantages of the island. They depicted it as a terrestrial paradise, and to express his satisfaction more forcibly, one of them averred that 'butter dropped from every plant' it produced.

In 870, Ingolf and Hiorleif, two Norwegians, wintered on the island, and on their return to Norway took measures to plant a colony, which they effected in 874. On their near approach to the shore, Ingolf threw the timber he had brought to construct a dwelling into the sea, and made a vow that he would build his house wherever it floated on shore. It came to land near Reykiavik, the present capital of Iceland.

To escape the usurping tyranny of Harold Harfager, the then king of Norway, many of the petty princes of that part of Scandinavia fled to Iceland. In a short time the entire coast was occupied by their dependants and followers, and Harold, to prevent the depopulation of his realms, was obliged to impose a heavy fine on such as should leave Norway for Iceland.

In 928 the Icelanders erected a regular republic. They divided their island into four quarters, or divisions, over each of which a chief magistrate, elected by the free suffrages of the people, presided. Each quarter was subdivided into three prefectures, or sheriffdoms, governed, severally, by an officer whose duty it was to preserve order, to call assemblies to try causes, to preside in such assemblies, and to see the punishments they awarded carried into effect. The prefectures were again divided

into districts called *Hrepps*, consisting of such families as resided in the same neighbourhood, and much resembling the hundreds of the Anglo Saxons. Over each of these a *Hreppstiori*, or headborough, was appointed, who was bound by his office to take care of the poor of his own district, to prevent their number from increasing, and to preside over inferior courts, each of which was to consist of four landholders. Such affairs as could not be settled in these courts were to be carried before the sheriff's court, to which the *Hreppstiori* were amenable. In extraordinary cases, there was an appeal to a court formed of deputies from the four quarters, but this court only assembled in cases of extreme emergency.

Lastly, there was a final court of appeal, called The Althing, or General Assembly of the Nation, held annually, and which sat sixteen days. In this assembly the laws of the nation were enacted, and here all differences were finally adjusted. The presiding officer was termed the Publisher of the Law, and his judgment, when confirmed by the people, was decisive. He was elected by the people, and commonly held his office for life. He had the custody of the standard copy of the laws. He had power to reverse the sentences of inferior magistrates, and of punishing them, on sufficient proof of malversation in office. So much importance did the Icelanders attach to this officer, that they computed time from the date of his administration.

In 927, Ulfiot, a learned Icclander, offered a code which he had prepared, to the acceptance of

the General Assembly. It was adopted, and became the statute law of the island. At the same time, Thingvalla, having been confiscated to the use of the nation, became the permanent seat of the Althing.

This code was an abstract of the laws then in force in Norway. In 1118 it was superseded by an improved code by Bergthor, then Publisher of the Law, and this code, in 1280, gave place to another, called Jonsbok, which obtains, in most instances, to this day.

Thus did a number of free persons, many of whom had been princes, establish a government as liberal in its principles as any that ever existed. They enacted laws that have been pronounced by competent judges admirably calculated to protect individual rights and privileges, and every way adapted to their peculiar circumstances. This state of things continued four hundred years, and was at last subverted by intestine broils and bloody quarrels, fomented and encouraged by the kings of Norway.

One attempt was made to introduce Christianity into Iceland, a little more than a century after its colonization. In 981, a Norwegian pirate brought over a bishop, and acted as interpreter to his missionary labors. They did not fully succeed, more especially as the pious pirate had, in the excess of his zeal, slain two of the heathen bards for satirizing the rites of his new faith; but they persuaded the Icelanders to refuse to pay the customary tax to support the worship of Thor and Odin. A few re-

ceived baptism, and a church was built, though not without much opposition.

Other missionaries were sent by Olave, king of Norway, but they only served as marks for the satire of the Runic poets. Such as they did convert were fined, and at last were banished from Iceland.

Persecution had its usual effect. The Christians gained ground, and in the year 1000 they obtained, after a hard struggle, that their worship should be tolerated. In the course of time, the whole of the population embraced Christianity. In 1551, the doctrines of Luther were fully introduced among them, and are still the ground of their faith, though a small number of the Icelandic clergy are Socinians.

Haco succeeded in subjugating the island. In 1261 the greater part of the people became tributary to him, and the rest submitted four years after. Even in their submission the Icelanders preserved the spirit of a free people, for the changes introduced by Norway were slight, and no foreign military force ever set foot on the island. They stipulated that they should retain their ancient rights and laws; that King Haco should be bound to continue the importation of the necessary articles of foreign produce, and that they should be governed by an Earl expressly appointed for that purpose. If the King of Norway should fail to fulfil these conditions, they were free to withdraw their allegiance.

In 1800 the venerable Althing was abrogated, and a supreme court substituted in its room at Reykiavik, consisting of a Chief Justice, two Assessors, and

a Secretary. This court meets once a month, and decides on criminal and other cases; but the Icelanders have the privilege of appealing from its decisions to the high court in Denmark. In ancient times, scarcely any other than pecuniary punishments obtained. Criminals were fined in a certain number of marks, each of which amounted to rather more than an ounce of fine silver, and was equal to fortyeight ells of woollen cloth; but as this mode of punishment was found ineffectual to the prevention of crime, the laws became gradually more severe, and at last capital punishments were introduced. Hanging was the mode inflicted for murders, drowning for child murder, and burning for witchcraft. At present, fines, imprisonment, and whipping are the only punishments inflicted in Iceland. Such as are capitally convicted, it is necessary to send over to Copenhagen to be beheaded; it being a curious fact that, for some time past, no person could be found on the island who would execute the sentence of the law.

At present, Iceland is governed by a Shiftamtman, who is appointed by his Danish majesty, and is bound to fill this office for the space of five years. He is generally one of the younger branches of a noble family, has a salary of about £500 per annum, and is entitled to preferment on his return to Denmark. He is likewise special governor of the southern quarter of the island in which he resides; and has two Amtmen, or deputy governors, one for the western, and another for the northern and eastern quarters. These quarters are divided into

sysselfs or sheriffdoms, the boundaries of which are much the same as those fixed in the ancient constitution; and they are governed by a Sysselman, whose office also resembles that of the ancient sheriffs—except that he has a lease of the King's taxes, and accounts to the royal treasurer for the amount. The sysselfs are again divided into a number of hrepps, each of which is placed under the inspection of a hreppstion or constable, answering to the bailiff of former times.

There is besides, another public officer called the Landfoged, or steward, who is treasurer or receiver-general for the island, and at the same time, tax-gatherer of Gullbringe Syssel and police master of Reykiavik.

In 1805, an Icclander, by name Jorgenson, attempted to revolutionize the island. He made the Danish governor prisoner, seized the reins of government into his own hands, and declared the nation independent. Not being supported by the British government as he expected, things soon reverted to their former state.

CHAPTER II.

Geologic Character of Iceland.—Volcanoes and Ice Mountains.—Mount Hecla.—Eruption of Skaptar Yokul.—Its Consequences.—Skaptar Yokul.

ICELAND is a chain of immense rocks, in the structure of which trap and basalt predominate. Their summits are crowned with snow, though everlasting fire burns in their subterranean caverns. Judging from its analogy with islands of known volcanic origin, and from the appearance of new islands near its shores within a century, there is little doubt, that it was thrown up by fires burning, perhaps, below the bottom of the ocean.

Tracts of lava traverse the island in every direction. The general appearance of the country is the most rugged and dreary imaginable. On every side are the yawning craters of active or extinguished volcanoes, the sources of the surrounding desolation. As if nature delighted to bring the most heterogeneous parts of matter in contact, the burning lava often gushes out of a solid mass of ice, and carries with it in its devastating course, a torrent of hot, muddy water.

We have neither time nor room to describe the tracts which are, or have been, inundated and covered with lava. Suffice it to say that the vents through which it has flowed are twentynine in number, and of these nine are still active; namely, Krabla, Leirhnukr, Biarnarflag, Hitahol, Hecla, Kotlugia, Solheima, Oræfa, and Skaptar Yokul. These are the principal, but there are besides a

countless number of smaller cones and craters, from which streams of liquid flame are, or have been, poured on the surrounding regions.

Celebrated as this island has been for its volcanoes and hot springs, it is scarcely less remarkable on account of the enormous ice-mountains which occupy a vast portion of its surface. To these mountains the natives give the name of Yokuls, which signify large masses of ice.

Though covered with coats of ice of immense thickness, when the internal parts of the mountains become ignited, the mass of ice, or indurated snow, is cracked and rent by the explosion which ensues; a great quantity of it is melted by the flames, or the exundations of hot water; and whole fields of ice are sometimes deposited on the neighbouring plains. Some of these Yokuls are remarkable for their vacillation; not remaining in a settled position, but moving forwards and receding again at certain indefinite periods.

Mount Hecla, the most celebrated of the volcanoes of Iceland, is neither the highest of its mountains, nor of the most striking aspect. The Treherning or Three Horned Mountain, has a far nobler and more picturesque appearance. Many of the mountains are higher. It is situated about thirty miles back from the coast, and is estimated at somewhat near 4000 feet in height. Its summit is divided into three peaks, the middle of which is the highest. The craters form vast hollows on the sides of these peaks, and, according to the last accounts, are partially filled with snow. The moun-

tain itself consists for the most part of sand and slags; the lava being confined to the lower regions, and forming an immensely rugged and vitrified wall around its base. From this circumstance it has been concluded that the lava has not proceeded from the crater at the summit of Hecla, but from apertures at no great elevation on its sides.

Sir George M'Kenzie, Dr Holland, and Mr Bright are the last travellers who have ascended Mount Hecla. On the 3d of August, 1810, they gained its summit, at which time they observed the vapor of water ascending from several parts of the middle peak, and the heat in the mountain was so intense, that on removing a few of the slags from the surface, they found those below too hot to be handled; and on placing a thermometer among them, it rose to 144°.

This famous volcano without doubt emitted lava previous to the settlement of the island. Since that date, twentythree of its eruptions are on record. They have occurred at intervals of many years, and more than sixty have elapsed since the last.

The most dreadful volcanic eruption on the records of Iceland was not from Hecla, but from Skaptar Yokul. It took place in 1783. To avoid repetition we shall give an account of it, as an example of the calamities which have occurred in the island from the same cause, premising that no other ever produced more lamentable consequences.

Till the month of May the season was unusually fine for the climate, and vegetation was un-

commonly forward. Toward the end of the month a light blue smoke, or fog, was seen floating along the surface of the earth, but none of the inhabitants were alarmed till the first of June, when several shocks of earthquake gave warning of what was to follow. They continued to increase in violence till the eighth. At nine in the evening a black cloud of smoke arose in the north, and extended itself over the whole district of Sida. On its near approach, Sida was involved in darkness, and when the cloud hovered directly over it, a shower of sand and ashes was discharged, which covered the ground an inch deep. Earthquakes, with incessant peals of thunder, and frightful subterraneous noises, continued through the whole day. On the tenth, several fire spouts were seen in the north, while the thunder and the commotions of the earth increased in violence.

The Skaptar was formerly a large river, and took its rise in Skaptar Yokul. On this day it totally disappeared, and was so dried up, that men crossed its bed on foot and dry shod, where the passage had been difficult in boats. The cause of this phenomenon made itself fully apparent two days after. A terrific stream of molten lava came pouring into the channel of the Skaptar. The cliffs between which this river run might average five hundred feet in height, yet the lava not only filled up the chasm, but overflowed a considerable tract on both sides. It is now only in a few places that the tops of the highest hills that enclosed the Skaptar can be seen above the lava that buried them.

No language can adequately express the horrors of this first eruption. A black cloud incessantly showered down sand, ashes, sulphur, and other substances. The fœtid smoke veiled the face of the sun, and when it did appear, its color was a sombre, bloody red. Constant earthquakes that threatened the foundations of the island, fire spouts innumerable, the lurid stream that filled the bed of the Skaptar, indescribable sounds in air and earth, with constant thunder, and one incessant sheet of lightning, were the objects presented to the senses of the affrighted Icelanders, and made them believe that the day of judgment had arrived.

Running with inconceivable fury, the stream of fire proceeded, bearing houses, enclosures, and everything else before it. When it reached the gorge through which the Skaptar took leave of the mountains, it might have been expected to overrun the lower districts; but providentially, a lake received it, and swallowed up a vast quantity of lava, so that the fire stream was much diminished. When the lake was filled up, the torrent extended itself over the lower grounds. This scene of havoc continued till the 15th of the month, and during this time a large tract of the best land on the island was covered and utterly ruined.

Till the 18th, the fire spread slowly over the country, lifting the lava of older date out of its place, and thereby creating rugged hills. Wherever the burning liquid found its way under rocks and hills, they were, by the expansion of their internal moisture, thrown into the air with prodigious

force. The terrors which must have attended the uplifting of such masses, many of them an hundred and eighty feet in height, and their fall, may be imagined, but cannot be described.

On the 18th, a dreadful eruption of lava broke from the craters of Skaptar Yokul. Where the Skaptar River had not been quite filled up, the lava rose to a height much exceeding the highest hills that enclosed the stream. It brought on its surface red-hot rocks that it had torn from their beds. A thick suffocating steam arose from two rivers which the lava had intercepted, and kept constantly boiling, and the hot water, which in consequence overflowed the low banks, did no small damage.

The next day the fire extended much farther, dividing into two branches, one running south and the other east, burning the country, and carrying away houses, churches, and all the fruits of the industry of the inhabitants. Thus it continued to advance, slowly, but surely, desolating and destroying all before it.

From the 22d of June to the 13th of July, fresh streams of lava broke out. In one place it rose, from the constant eruptions, into a lofty hill, and became hard and solid, preventing the new streams which poured from the mountains from finding a free passage, and dividing them into many branches. In one place it ran in the bed of the Skaptar over the lofty fall of Stapafos, exhibiting a literal cataract of flame, and finally obliterated all traces of the fall, by filling the gulf beneath.

On the 3d of August the river Hverfisfliot dried up in the same manner that the Skaptar, to which it was equal in size, had done. It was before the end of the month filled and obliterated as the Skaptar had been. It is needless to describe the minutiae of this desolation farther. The lava stream did not reach the sea, like those from Hecla, because the mountain from which it flowed was at a distance four times greater than that of Hecla from it. The lava continued to burst forth, though at longer periods and in smaller streams, till February, 1784. In the course of this flood of fire many large rivers were effaced from the map, many farms were swept away, much property was destroyed, and large tracts of land were laid waste, but we are not aware that any human lives were lost. The quantity of ashes, sulphur, &c., ejected into the air, was so great that nearly the whole European atmosphere was obscured. In the Faro Islands, the earth was at times covered with sand, ashes, and pumice. Luminous meteors were observed in England, Holland, and other parts of the continent, and tremendous earthquakes shook the northern hemisphere.

We said that no human lives were lost by this eruption, but this must be understood as applying to its direct effects. Inveterate diseases, in the form of scurvy, broke out, even in parts remote from the fire. In six parishes only, one hundred and sixty persons were carried off before the June following; but some of these perished by famine. The same symptoms were observed in the human race and the brute creation. The limbs, throat,

and head, were dreadfully swollen, and the joints contracted, as well as the ribs. The sinews of the sufferers were drawn up, they were oppressed with pains in the breasts and loins, their teeth became loose, their gums mortified and came away, and in many cases the tongue perished in the same manner, while the patient was yet alive. Not to enlarge on this painful topic, we may suppose that the want of food and the consumption of that which was unwholesome, the poisoned waters and the foetid air they breathed during the eruption, were sufficient to produce these epidemic results, without the aid of contagion.

The total number that perished from these causes was nine thousand.

The loss of cattle and sheep was very severely felt by the Icelanders, and many species of birds were frightened from the island and never returned. The fishery was interrupted an entire year. The only benefit to balance all these calamities was that the fertility of such lands in the vicinity of the conflagration as had not been overflowed, was increased.

Skaptar Yokul, which gave vent to the fiery plague, is an ice mountain, and, it is supposed, has a subterraneous communication with Oræfa, Sida, and other volcanoes, though at the distance of many miles. It is situated near the boundary of the district called West Skaftafell Syssel, near the sources of several rivers. It consists of about twenty red, conical hills, which have been the furnaces from which so much molten matter has boiled over. The Icelandic rec-

ords make no mention of any former eruption of this volcano, but the situation of the ancient lava in its neighbourhood proves that it was active at some time, probably before the discovery of Iceland. The eruptions of those volcanoes supposed to be connected with it, have, perhaps, had the same origin. Henderson thinks that all the Yokuls are but different vents of ore, and of the same internal fire, which sometimes breaks out in one place, and sometimes in another.

An account of the several eruptions that have ravaged this island, from time to time, would be but a repetition of the same phenomena, the same havoc, and the same misery, in greater or less degrees. The public is already acquainted with the most remarkable. We judge it proper, therefore, to let this description of Skaptar Yokul stand for the whole, and pass on to another chapter.

CHAPTER III.

Situation of the Geysers.—Description of the Great Geyser.—Its Eruption.—
The Strochr.—The Old Strochr.—The Little Geyser.—Hot Springs at
various Places.—Mountains.—Oræfa Yokul.—Crater of Krabla.

OF all the new and strange forms and operations of matter in Iceland, none are more remarkable than its hot springs, called in the Icelandic tongue *Geysers*. There are many of these in different parts of the island, at considerable distances from each other.

Those termed emphatically *The Geysers*, are the most deserving of notice.

They are situated in the district of Arness Sysself, northeast from Thingvalla. Several miles from the Great Geyser the traveller may descry the spot, by the eternal cloud that hovers over it. The springs are situated at the foot of a low hill, in countless multiplicity. The Great Geyser gushes from a large circular mound formed by its own deposits. A great evaporation constantly goes on from this basin, which is always more than half filled with hot, crystalline water, in a state of ebullition caused by the escape of the steam from a cylindrical pipe or funnel in the centre. This pipe is seventy-eight feet deep perpendicular, and from eight to ten feet in diameter. Near the top it widens and opens into the basin, the interior surface of which is covered with a whitish, siliceous incrustation, rendered perfectly smooth by the ceaseless action of the boiling water. The diameter of the basin is fifty-six feet in one direction, and forty-six in another. When full, the water is four feet deep to the mouth of the pipe. The edges of the basin form the highest part of the mound, and are extremely broken and irregular, owing to the accretion of deposited substances. There are two small channels, equally polished with the rest of the basin, through which the water escapes when it is filled to the margin. The declivity of the mound is abrupt, especially on the northwest side, but soon begins to slope more gradually; and the deposits of the fountain are spread all around, at different distances, the least of which is an hundred

feet. The whole of this surface, excepting the two small channels, exhibits a beautiful siliceous efflorescence, rising in small granular clusters, much resembling the heads of cauliflowers. While wet they are of so delicate a texture that they can hardly be removed in a perfect state. They are brown or yellow. Leaving the mound, the water flows through a soil of turf, and in passing converts the peat, moss, and grass into stone, the finest specimens of petrification. This is the appearance of the Great Geyser when tranquil. Its explosions are commonly announced by sounds resembling the low report of artillery. Each of the reports is accompanied by a partial earthquake. A few small jets are thrown up, though the water in the basin does not overflow the margin. The water boils violently and the basin begins to fill. The sounds of subterraneous commotion become louder and more frequent, and the concussions of the earth more violent. At last, the pent steam explodes, and the water is thrown up from the pipe with great force, and clouds of vapor attend its flight upward. The first jets are generally inconsiderable, not more than fifteen or twenty feet high; but the highest often exceed eighty. If large stones are thrown into the basin previous to the eruption, they are ejected and thrown much higher than the water. On the propulsion of the jets the water nearest the orifice of the pipe is lifted more than a foot; and when the spout falls, the basin not only overflows at the usual channels, but also at the highest parts of the brim. The great body of the column, at least ten feet in diameter, rises

perpendicularly, and then divides into beautiful curved ramifications, some of which are projected laterally, to the great danger of the spectator, who may be scalded by the falling jet before he is aware. At the cessation of the eruption the water sinks within the funnel, but immediately rises again, and fills the basin to its usual depth.

Before the explosion, the water is usually at the temperature of 193° of Fahrenheit, and immediately after at 183°. This difference is caused by the cooling of the water during its projection into the air.

The explosions of the Great Geyser take place at intervals of about six hours, which time is probably requisite to generate steam enough to produce such tremendous bursts. The highest jet at any one eruption is commonly about eighty feet, though the water has several times been seen projected more than two hundred, and once three hundred and sixty feet.

The Strocker, or New Geyser, is situated an hundred and forty yards from the Great Geyser, and in many respects, though different, is as remarkable as the principal fountain. Its orifice is nine feet in diameter. Its jets are higher than those of the Great Geyser, more violent, generate more vapor, and are accompanied by a tremendous roaring noise. When they have subsided, the steam is let off with a deafening roar, and rushes to a height little inferior to that of the water. The largest stones that men can lift, if thrown in, are instantly ejected to an incredible height; frequently beyond the sphere of

vision. Sometimes in falling they are met by a new rush of steam, and thus kept in the air, alternately rising and falling for the space of five minutes. When the Strochr is in action, the spray forms beautiful rainbows, and becomes quite cool before it reaches the earth.

The crater of this fountain is fortyfour feet deep, and is not perpendicular like that of the Great Geyser. One side of the orifice is defended by an incrustated wall a foot and a half high, and the other is on a level with the surface of the ground.

There was formerly another fountain of equal magnitude with the Great Geyser, but after an earthquake in 1789 it became tranquil. It was called the Strochr; and as the spring we have just described, broke out in the same year, it received its name.

In the year 1784, immediately after a dreadful earthquake, no less than thirtyfive similar springs gushed forth with amazing violence, but the fury of most of them abated soon after.

The description already given is perhaps sufficient to convey a proper idea of the Geysers; but a few more observations will not, we hope, be deemed impertinent. Sometimes the Great Geyser and the Strochr erupt at the same time, and the smaller springs keep them company. The Strochr may be made to explode at any time, by throwing in large stones; but it does not play at the usual time when its periodical evacuations are thus interrupted.

The Little Geyser plays at intervals of two hours, but its jets are not often more than eighteen or

twenty feet high. The crater of this aqueous volcano opens into a beautiful circular basin, twelve feet in diameter, incrustated like that of the Great Geyser. The pipe is scarcely a yard wide, but it is thirtyeight feet deep. There is another vent a short distance from the Little Geyser, which roars and becomes quiet with it. Many of the springs are covered with incrustated domes below, which is a boiling abyss. The Little Strocker emits its contents every quarter of an hour, in a fantastic manner.

There are also several springs of boiling mud; and not far from the Great Geyser is a reservoir of boiling water of vast dimensions, and fifty feet deep.

The Hot Springs of Laugarvalla are not considered remarkable. Those of Reykialaug are three in number, and are sometimes used as baths. The fountains of Reykiahverf are second in magnitude only to the Geysers, and jet only in stormy weather. At Staffholli there are six boiling springs, which project their water but a foot high. There is one at Lysuhol, and others at Reykiaholar and other places; but none to compare with the Geysers. At Hveravellir there are remarkable ones; but the greatest curiosity at this place is a steam spring, which discharges its vapor with a noise louder than the greatest cataract. Stones thrown in are instantly cast forth again to a considerable height.

The mountains of Iceland all are, or have been, volcanoes. They are of two kinds; the Yokuls or Ice Mountains, and those which consist of common materials. A description of one of each may serve for the whole.

Oræfa Yokul is supposed to be the highest mountain in Iceland. Its height is six thousand two hundred and forty feet. The low mountains which form its lower divisions extend to the coast, and are covered in the summer with a coat of green. The upper regions are composed of the purest snow and ice. The River Breidamark Yokul flows along its base. What are called Yokul bursts are of frequent occurrence. The ice on the sides of the gullies falls in with tremendous noise and jarring. There are many chasms or fissures, where the ice of which the mountain is composed has been cracked by internal commotion. The summit rises into three or four precipitous peaks, which inclose an immense crater.

In the year 1362 this Yokul burst with an awful explosion, and devastated the coast in the vicinity. It deluged the country at its base with lava, clay, gravel, and hot water. It was again active during the last century.

The Sulphur Mountain lies between Krabla and Leirhnukr, and joins the ridge by which the two mountains are connected. Here the sulphur exhales in such profusion that the natives collect enough to form a very considerable branch of traffic.

Leaving the Sulphur Mountain, the traveller proceeds toward mount Kravla, over hot quagmires and among boiling springs, the jetting of which throws up vast quantities of mud, accompanied with a hoarse roar, with the escape of clouds of sulphurous vapor. Passing over a desolate lava tract, he crosses a deep gully, worn by a mountain stream,

and begins the ascent. Arrived at the summit, he looks down seven hundred feet into the extinct crater of the volcano. The earth has fallen in and filled it, but at the bottom a black pool of boiling mud throws up its turbid contents every five minutes, to the height of thirty feet. The column raised is equal to that of the Great Geyser in its most violent commotion.

CHAPTER IV.

The Cave of Surtshellir.—Towns and Settlements. Reykjavik Videy.—Druidical Circle at Thingvalla.—Holum.—Akur Egri.—Population of Iceland.—Religion and Form of Church Government.—Clergy.—Education.—School at Bessastad.—Icelandic Literature.—Runic Poetry.—Death Song of Regner Lodbrok.

AT Surtshellir is a long cavern, forty feet high, fifty broad, and five thousand and thirtyfour in length. The entrance is through several chasms formed by the falling in of the roof. It was supposed in days of yore to be the residence of the king of the regions of fire.

This cave has been formed by volcanic agency. Stalactites indicating this origin, hang from the roof, and the sides of the cave are composed of horizontal vitrified layers composed of melted rock. Several passages branch from the main cavern, which were once the asylums of pirates and banditti, of whom mention is made in the annals of the island. One of these passages has a stone wall three feet high across it, with a door in the middle, and is

strewn with the bones of animals killed by the robbers for food. This cave is three hundred feet long. The floor of the great cave is obstructed by fragments of lava which have fallen from the roof, and in some places is covered with pools of water, lying on a bottom of everlasting ice.

One of the minor caves is coated with pure ice in every form of crystallization. Pillars of the same material, four feet in diameter, rise from the floor, and seem to support the roof. Altogether the *coup d'œil* is the most beautiful imaginable. In another apartment there is a large pyramid, composed of broken pieces of lava.

Some description of the towns and villages of Iceland is doubtless necessary. We see no reason why it should not follow here, in the midst of a chapter which can come under no general head. There are not caverns or towns in Iceland in sufficient number to fill a chapter, and neither can be properly omitted. We will begin with Reykiavik, the capital of the island.

Little more than sixty years ago there were but few houses in Reykiavik; but having become the residence of the governor, the seat of the supreme court of judicature, the principal commercial station, and the episcopal see, it has risen to some importance. It is situated on the south side of a considerable inlet of the Fare Fiord, between two grass clad eminences, on low, marshy ground. There are two streets, one occupied by merchants, and the other by persons not engaged in trade. The public cemetery is in the middle of the latter. The

church is a heavy stone building, covered with red tiles, and stands between the town and the lake. The house of correction is also of stone, and has the most respectable appearance, at a distance, of all the buildings in the place.

The dwelling houses, with two or three exceptions, are of wood, and a small garden and one or more store-houses are attached to each. The frames are constructed in Norway, and brought hither. At the west end of the merchants' street stand the public stocks, or rather pillory; for the culprit stands on a block, with his arms secured in two iron rings. An observatory stands on a height, west of the town. For twenty miles round Reykiavik, the country is flat and barren.

Reykiavik comes under the censure of the reverend traveller Henderson. He describes it thus: 'It is totally destitute of the means of intellectual gratification. The foreign residents idle away the day with their tobacco pipes, and spend the evening playing at cards and drinking punch. They have two or three balls in the course of the winter, and the principal inhabitants sometimes enact plays. An instance has been known of an individual who performed a part in a play late on Saturday night appearing in the pulpit on Sunday morning, in the character of a public teacher of religion!' &c. &c.

In the bay, at a short distance from the town are several small islands, the resort of eider duck and other aquatic fowls. Videy is the principal of these, and from the richness of its pastures is thought to be the most desirable spot in that part of Iceland.

It rests on pillars of basalt, which, with the crater of an extinct volcano near the houses, leave no doubt that it was thrown up by a submarine eruption. Similar appearances, as well as some hot springs, are to be seen near Reykiavik.

At Thingvalla, the former seat of the National Assembly, there is no town, yet the spot is remarkable on several accounts. The Blot Steinn, or stone where human victims were sacrificed is still to be seen there, in the centre of a circle of other large stones. It is of an oblong shape, with a sharp summit like the steep roof of a house, on which the backs of the victims were broken. Similar circles abound in ancient Scandinavia, and it is extremely probable that Stonehenge and other druidical circles in Great Britain were erected for the like purpose. Thingvalla is on the border of a lake called Thingvalla Vatn.

Holum is beautifully situated at the foot of Mount Holarbyrde. It is a pretty village, and has the finest church in the island. It formerly boasted a printing press and a school; but the press was removed, and the school merged in that of Bessastad. Mountains bound the prospect on every side. Three editions of the Icelandic Bible were printed in Holum.

Akur Eyri is one of the principal trading stations on the north coast of Iceland. It is situated on the west side of Egafjord Bay, and consists of eighteen or twenty dwellings and store-houses.

The other villages are not remarkable for anything. They have few houses, and are no way distinguishable but by their vicinity to churches, mountains, hot springs, or other land marks. Indeed the

population of Iceland is very sparingly distributed. It is supposed to have been much greater in former times than at present. Successive epidemics have swept the inhabitants away. The small pox cut off sixteen thousand in 1708. The last census, of 1801, gave a result of fortyseven thousand two hundred and seven, since which there has been an increase of three or four thousand.

The form of worship in the churches of Iceland is Lutheran, and if the churches are less elegant than those of other countries, it is not owing to a lack of will to build better, but to the poverty of the inhabitants. Beside the Episcopal See at Reykiavik, there is an archdeacon, who supplies the place of the bishop in case of sickness or absence, and there are eighteen deans, who superintend the clergy within their respective districts.

The number of parishes in Iceland is one hundred and eightyfour; but as some of them include a large territorial space, it has been found expedient to build two or three churches in them. There are three hundred and five churches in all. Some of the priests have assistants. They are all natives of the island, and are maintained by the cultivation of glebes attached to the churches, and by certain tythes levied on the peasantry. The provision is extremely scanty; the best living on the island does not produce two hundred six dollars. Most of them have a stipend of from twenty to thirty, and in some instances it does not exceed five.

Nevertheless, the Icelandic clergy are in general attentive to the discharge of their duties and to the

education of the young, according to their own ideas of education. Every priest keeps what he calls his 'register of souls,' which contains a statement of the situation, character, &c., of every individual in his parish. The books belonging to each family are also entered therein.

The ecclesiastics are naturally divided into two classes. Those of the old school receive the bible with implicit deference, as the word of God; those of the new, are few in number, and discard, or at least do not insist on the divine inspiration of the scriptures, or inculcate doctrinal points. They preach the excellence of pure lives and morals instead, and often illustrate their maxims by reference to profane writers.

The habits of the inhabitants are essentially religious; they attend public worship regularly, and their priests have much influence with them. As to the clergy themselves, they have little communication with each other, and consequently little of the *esprit du corps*.

As there are none or few parish schools in Iceland, the mental cultivation of youth depends in a great measure on the parents. In general these are not wanting in their duty, for their sense of national honor and of self-respect is very high. The children are taught their letters by their mother, and the higher branches of education by their father: every clergyman is bound to visit the several families twice or three times a year, and on such occasions he catechizes old and young.

These are the only opportunities of learning that

the bulk of the Icelandic population enjoy ; nevertheless, emulation of their forefathers, the desire and necessity of knowledge, and their excellent domestic habits stimulate them to exertion ; and in many cases, the amount of science and literature acquired is truly astonishing. It is not uncommon to hear ragged peasants discussing topics, which, in other countries, are only propounded from the chairs of learned professors.

There is a school at Bessastad, at which twenty-five students are admitted. They are taught arithmetic, history, geography, and theology, as well as the Latin, Greek, Danish and Icelandic tongues, and the elements of Hebrew. The library consists of a thousand volumes, of which the greater part are theological. None are admitted at this seminary but such as come recommended by the clergymen of their respective parishes, which recommendation must be approved by the bishop, to whose superintendence the institution is committed. The school is supported by the rents of landed estates set apart for the purpose.

The period allotted for instruction begins about the first of October and lasts till the end of May, when the students undergo an examination. The time they are permitted to remain is not determinate, but depends on the industry and ability of the individual. If any one is so dull as not to pass after seven examinations, he is dismissed as incapable of tuition. Those who pass an honorable examination obtain a *dimissus*, and after some farther study may become candidates for public offices. Some of the

young men, who have wealthy connexions, are sent to the university at Copenhagen; but very few of the Icelandic clergy have any other education than that obtained at Bessastad; which is the only considerable school on the island.

Of so much importance is proper instruction considered, that parents are punished for neglecting it. Henderson speaks of the inhabitants of Lagavfliot as exceptions in the character of the population, being addicted to sloth, swearing, and slander. On one occasion they were summoned before the Sysselman's court, to answer for their conduct. It appeared that the children *had* composed *nidingavisar*, or satiric songs (to which the Icelanders have ever been addicted) on the parish priest and others, even on their own parents. They were sentenced to be beaten with rods, and to do public penance in church, as an awful warning to the congregation. For neglecting or failing to teach their children better, the parents were fined sixtyeight rix dollars, forty-eight for the use of the poor, and the rest to defray the cost of the suit.

The art of writing in Roman letters (for the use of Runic characters was known long before), was introduced into Iceland in 1057. The historical composition of Icelandic writers are very numerous, and are known by the name of Sagas. Most of them are worthy of full credit. Their minuteness and simplicity are strong evidence of their truth, and their authenticity is established beyond a doubt by volumes of extrinsic testimony. Some of these writers studied in Europe, but Ari Frode and

Snorro Sturluson never left their native island. The golden age of Icelandic literature was from the beginning of the twelfth to the middle of the fourteenth century.

The ancient Scandinavians were, and the Icelanders are, possessed of a peculiar and original national poetry; deeply tinged with the boldness and enthusiasm that distinguished the race of Odin. The gift of poetry was supposed to be inherited from Odin himself. The skalds, from whom it emanated, were bards by profession, and rehearsed their effusions for the amusement and instruction of assembled companies. Their subjects were the history and the warlike deeds of their progenitors, and the praises and exploits of the gods of their ferocious mythology.

About the beginning of the ninth century the Runic bards abandoned the simple and natural style of antiquity. They reduced their compositions to metrical rules, and introduced several new species of versification. Nor was the new manner more different from the old than the matter. While the earlier poems embraced abstract ideas, ethics and the pleasures of pastoral life, the latter was exclusively martial. From the death of Regner Lodbrok, who died in the latter part of the eighth century, in the space of three centuries, we find the names of two hundred poets, whose existence is established by indubitable proof. Fragments of eighty of these, most of them natives of Iceland, are preserved, which show us how great a loss we have had in the rest. Since the reformation, the Icelandic poets

have in a great measure confined themselves to religious subjects and to translation.

In the death song of Regner Lodbrok, we have a striking instance of the spirit which marked the poetry of his time. Regner was a king of Denmark, who was made prisoner by Duke Ella, in a predatory descent on the coast of Northumberland. As a punishment for the havoc he had made, he was shut up with serpents; and while he was dying of their venom, he sung his death song. To save farther remarks on this topic, we conclude this chapter with a few verses translated from it.

CHORUS.

We hewed with our swords.

LODBROK.

High I bore my lance, and wide I carried my ensanguined blade before I numbered twenty years. Eight earls graced my triumph at the Dwina's mouth—there we the falcon entertained with plenteous meals. The crimson sweat of death poured on the sullen sea. Warriors lost their lives.

CHORUS.

We hewed with our swords.

LODBROK.

On Ulla's plain loud roared the spear, ere to our force king Eistein bowed. Gleaming in gold we traversed the field of slaughter. The tapering lance, indignant, bored the shield, at the helm'd conflict. Rills of winy hue, warm from the wounded neck, flowed down the hero's shoulder.

CHORUS.

We hewed with our swords.

LODBROK.

I sought a noble mother for my children—one that might impart adventurous hearts to our posterity. Now to my heir devolves the crown. Grim seem the terrors of the adder. Ser-

pents rest within my heart's recesses—yet 't is the cordial of my soul that Vithris' lance shall soon stick fast in Ella. My sons will swell with vengeance at their parent's doom—those generous youths will, sure, forego the sweets of peace.

CHORUS.

We hewed with our swords.

LODBROK.

Full fifty times my lance, dire devastation's harbinger, announced the distant enterprise. Methinks no king has truer cause to glory. It was the pastime of my boyish days, to tinge my spear with blood. The immortals will permit my presence in their company. No sigh shall ever disgrace my exit.

CHORUS.

We hewed with our swords.

LODBROK.

See ! the celestial virgins, sent from that hall where Odin's martial train reside, invite me home. There, happy on my high raised throne, I'll quaff the barley's mellowed juices. The moments of my life are fled. The smiles of death compose my placid visage.

CHAPTER V.

Personal Appearance of the Icelanders.—Character, Language, and Literature.
—Dress of the Males.—Dress of the Females.

THE Icelanders of the present day are tall, of a frank open countenance, a florid complexion, and yellow flaxen hair. The women are shorter in proportion, and more inclined to corpulency than the men ; but many of them would look handsome in a modern European dress. In youth, both sexes are generally of a very weakly habit of body, which is the necessary consequence of their want of proper exercise, and the poorness of their living ; yet it is surprising what great hardships they are capa-

ble of enduring in after life. It is seldom that any of them attain to a very advanced age ; however, the females commonly live longer than the men. Owing to the nature of their food, their want of personal cleanliness, and their being often obliged to sit long in wet woollen clothes, they are greatly exposed to cutaneous diseases. They are also frequently attacked with obstinate coughs and pulmonary complaints, by which perhaps more are carried off annually than by any other disease.

Their predominant character is that of unsuspecting frankness, pious contentment, and a steady liveliness of temperament, combined with a strength of intellect and acuteness of mind seldom to be met with in other parts of the world. They have also been noted for the almost unconquerable attachment which they feel to their native island. With all their privations, and exposed as they are to numerous dangers from the operation of physical causes, they live under the practical influence of one of their common proverbs : *Island er hinn besta land sem solinn skinnar uppa*. ‘Iceland is the best land on which the sun shines.’

In the persons, habits, and customs of the present inhabitants of Iceland, we are furnished with a faithful picture of those exhibited by their Scandinavian ancestors. They adhere most rigidly to whatever has once been adopted as a national custom, and the few innovations that have been introduced by foreigners are scarcely visible beyond the immediate vicinity of their factories. Their language, dress, and mode of life, have been invariably

the same during a period of nine centuries ; whilst those of other nations have been subjected to numerous vicissitudes, according to the diversity of external circumstances, and the caprices of certain individuals, whose influence has been sufficiently powerful to impart a new tone to the society in which they moved. Habituated from their earliest years to hear of the character of their ancestors, and the asylum which their native island afforded to the sciences, when the rest of Europe was immersed in ignorance and barbarism, the Icelanders naturally possess a high degree of national feeling, and there is a certain dignity and boldness of carriage observable in numbers of the peasants, which at once indicate a strong sense of propriety and independence.

The Icelandic is justly regarded as the standard of the grand northern dialect of the Gothic language. While the Swedish and Danish, and even the Norwegian, which is a kind of middle dialect, have been more or less subject to the influence of the Teutonic or German branch, that originally spoken in Scandinavia, has been preserved in all its purity in Iceland. In the middle ages, it was known by the name of *Donsk Tunga*, or, the Danish Tongue ; the Icelanders at first called it *Norræna*, because they had brought it along with them from Norway, which name pretty much resembles that of *Norns*, or *Norse*, by which the corrupt dialect, spoken till within these few years in some parts of Orkney, has been designated ; and it was not till after it had ceased to be spoken on the continent, that it

assumed the name of Icelandic. The remoteness of this island, and the little intercourse which its inhabitants have maintained with the rest of the world, have effectually secured the purity and originality of this ancient language ; and it is a curious fact, that while our ablest antiquaries are often puzzled, in endeavouring to decipher certain words and phrases in writings which date their origin only a few centuries back ; there is not a peasant, nor indeed, scarcely a servant girl in Iceland who is not capable of reading with ease the most ancient documents extant on the island.

The early and successful application of the Icelanders to the study of the sciences, forms a perfect anomaly in the history of literature. At a period when the darkest gloom was spread over the European horizon, the inhabitants of this comparatively barren island, near the north pole, were cultivating the arts of poetry and history ; and laying up stores of knowledge, which were not merely to supply posterity with data, respecting the domestic and political affairs of their native country, but were also destined to furnish very ample and satisfactory information on a great multiplicity of important points connected with the history of other nations. To this a wonderful combination of circumstances proved favorable. The Norwegians who first went over to Iceland, were sprung from some of the most distinguished families in the land of their nativity. They had been accustomed from their infancy to listen to traditionary tales of the deeds of other years ; they had frequented the

public assemblies, where they saw the value and importance of knowledge; and in the course of their numerous practical expeditions and invasions, they had obtained an intimate acquaintance with the situation, politics, history, &c., of the different countries of Europe. Being in the habit of clothing all events of importance in poetic language, an accurate knowledge of these events was secured to posterity, while the share that some of themselves, or their immediate ancestors had had in any of them, naturally excited a desire to recite them in the family circle; and the undisturbed enjoyment of tranquillity, during a long winter of eight months continuance, afforded them the best opportunities of bending their attention to the study of the different branches of literature.

On inquiring into the state of mental cultivation in Iceland, it is not so much the literary fame of a few select individuals, who have enjoyed superior advantages, which strikes our attention, as the universal diffusion of the general principles of knowledge among its inhabitants. Though there is only one school in Iceland, and that is exclusively designed for the education of such as are after to fill offices in church or state; yet it is exceedingly rare to meet with a boy or girl, who has attained the age of nine or ten years, that cannot read and write with ease. Domestic education is most rigidly attended to; and it is no uncommon thing to hear youths repeat passages from the Greek and Latin authors, who have never been farther than a few miles from the place they were

born. Nor is there scarcely a hut, where there is not some individual capable of conversing on topics which would be reckoned altogether above the understandings of people in the same rank of society in other countries of Europe. On many occasions, indeed, the common Icelanders discover an acquaintance with the history and literature of other nations, which is perfectly astonishing.

In their general habits and dispositions, the Icelanders are a very moral and religious people. They are carefully instructed in the principles of Christianity at an early period of life, and regularly attend to the public and private exercises of devotion. Instances of immorality are in a great measure confined to such as frequent the fishing places, where they are often idle for days together.

The male Icelanders wear shirts of wadmél, (coarse woollen cloth) and blue waistcoats; jackets and trowsers of the same material, edged with red. At home they wear a cloth cap, but when they go abroad they put on broad-brimmed hats, as also cloaks to defend them from the cold and rain.

A reverend traveller speaks of the costume of the females as having reminded him of the necessity of 'robes of righteousness and garments of salvation:' and as it is very becoming, we shall attempt a description of it.

Next the body is a garment of wadmél, fastened at the neck with a brass or silver button. Beside two or three blue skirts of the same stuff, they have a blue apron, bordered with black velvet and fringed at the top with brass or silver ornaments. The

jacket or bodice is of red or black wadmél, the back seams of which are covered with stripes of velvet, and in front are two broad borders of the same, elegantly ornamented with silver clasps by which it is fastened, and with a profusion of embroidery. A girdle, garnished with polished pebbles, or silver, secures the apparel. Round the neck is worn a ruff of black velvet two inches broad, and embroidered with silver thread.

Above the bodice is another jacket, of black wadmél, with tight sleeves, garnished at the wrists with silver buttons. Over all, is a black cloak bordered with velvet. Blue or red worsted stockings, and painted sheepskin shoes complete the costume. Those in good circumstances wear silver medals, suspended from the neck by chains of the same metal, with legends of religious import.

But a curious and fantastic head-gear disfigures the whole fabric. It is made of white linen, stiffened with pins, and rising from the head to the height of twenty inches. The bridal dress is still richer.

CHAPTER VI.

Cold in Iceland.—Polar Ice.—Winter.—Summer.—The Fishery.—Summer Occupation of the Icelanders.—Occupation of the Women.—Treatment of Strangers.—Pastoral Life.—Houses of the Icelanders.—A Winter Evening in Iceland.—Horses.—Reindeer.—Visit to the Trading Houses.—Exports and Imports.

THE cold is not more intense in Iceland than in the most favored part of Denmark, and the thermometer seldom or never sinks to zero. What affects the temperature most is the arrival of floating ice from Greenland. It arrives in immense masses, often so large as to run aground in eighty fathoms, choking the friths and bays and extending so far that its extremities cannot be discerned from the mountain tops. In 1766 the whole strait between Iceland and Greenland was closed by it, but it seldom surrounds the whole island.

When it remains for a long time on the coast, the winter snows are longer in melting, the frost remains in the ground, vegetation is checked, and the summer is so short that the people have great difficulty to get in their hay. Polar bears are also brought on the ice. When it is known that one of these has arrived, the inhabitants of the district turn out en masse in pursuit. He who kills the bear not only gets a good price for the skin, but receives a considerable reward from the king of Denmark.

The Aurora Borealis is seen in all its beauty during the winter, almost every clear night. Sometimes a steady stream of light shoots across the

horizon, but more commonly the corruscations exhibit a tremulous motion, leaping and dancing about with amazing velocity. They are mostly of a faint yellow, but are sometimes mixed with red and green.

The distance between the houses, the rents and chasms in the lava then hidden by snow, and the half frozen rivers, with many other obstacles, prevent the Icelanders from travelling farther in winter than his own parish church; and he is often compelled, however reluctant, to abandon this tour for weeks together.

Strictly speaking, there are but two seasons in Iceland; summer and winter; the former of which must be diligently spent in preparation for the latter. From the third of February to the twelfth of May is what they call the fishing season. At this period they flock to the southern and western shores, clad in dresses made of skins. During this time their food is butter and fish, which they only eat early in the morning and late in the evening, the rest of the hours being spent at sea. The boats are manned with from six to nine hands each, and row a great way out.

When they return to land the fish are divided into separate shares, two of which the owner of the boat claims for the use of it and of his hooks and lines. The fishermen retire to rest, and the fish are cared for by the women. The fish are mostly cod.

When the snow leaves the ground, the men collect turf for fuel, and to cover the roofs of the houses,

&c. When the young cattle have been driven to the mountains, the care of the sheep and cows, and the labors of the dairy devolve on the females, who about the middle of the summer repair to the waste lands to collect edible lichen. This time they spend in tents as before mentioned, and in the mean while the men fish in the fresh waters, or visit the factories.

The most important part of Icelandic rural labor is haymaking. About the middle of July the grass is mowed and gathered in a convenient place to dry, and then conveyed to the yard, where it is made into stacks. In poor families the females as well as the men handle the scythe.

Hay harvest over, the sheep and cattle are brought in, and the occupations of the season conclude. The horses are left to shift for themselves all winter, and the men attend to the cows and sheep. Winter sets in, and the males forge the necessary implements of iron, copper, &c., for they are all smiths, and some of them are wonderfully expert. They also prepare leather for shoes, make ropes, and full the woollen stuffs.

Beside their culinary avocations, the females employ themselves in spinning with the spindle and distaff, knitting, and making and mending clothes.

It would appear that the Icelanders are kind, and hospitable to strangers, as they are in the habit of bidding them 'come in peace,' and invoking blessing on their heads, as well as of mounting them on their shoulders to carry them ashore when they land. In every house there is a room set apart for the ac-

commodation of strangers, which is always the best in the house. On entering a house, the salutation of the visitor is 'May God be in this place;' and the reply is, 'The Lord bless you,' even when the visit is at an unseasonable hour, and very inconvenient. On entering, etiquette requires to salute the family in regular order, from first to last, beginning with the highest in rank; but departing, the order is reversed.

Nothing can be more truly polite and sincerely affectionate than their reception of unwonted guests. Their humors are studied, their wants watched, and every effort is made to comply with the one, and to relieve the other.

While the natives are gathering the lichen of Iceland, or pasturing their sheep and cattle, in the waste lands, in the summer, they dwell in tents, much like those of the Bedouin Arabs. They are erected in the following manner: two poles, five or six feet long, are stuck fast in the ground, seven or eight feet apart. They are joined at the top by a third pole, over which the tent, made of coarse woollen, is spread, and braced tight with cords fastened to the eaves and tied at the other end to crooked wooden pins which are driven into the ground. The flaps are provided with small holes round the border, and are secured in the same manner, excepting at one end where a small portion is left loose to serve as a door. The natives pass several weeks on the mountains every summer, in these tents, and are quite partial to this primitive way of living.

In general the permanent houses of the islanders

are built alike, in the fashion of the original settlers from Norway. The walls are about four feet high, and six feet thick, and are composed of alternate layers of earth and stone, inclining a little inward : they are met by a sloping roof of turf, supported by a few beams, which are crossed by twigs and branches of birch. Good grass grows on the roof, which is always mowed at the time of haymaking. In front of the house there are three doors. The middle one opens into a long, dark passage, into which are entrances from either side from different apartments, such as the stranger's room, the weaving room, the kitchen, and the sleeping room, which last serves for a sitting and working apartment, as well as a dormitory. The light is admitted through small apertures in the roof, covered with thin sheepskin, though in some instances glass is substituted. Such houses as have windows in the walls resemble the exterior of a bastion. The smoke escapes through a hole in the roof from the kitchen only ; for no fire is made in any other apartment, even during the coldest winter weather.

The beds are arranged on both sides of the room, on open bedsteads raised three feet from the ground. They are filled with sea-weed, feathers, or down, according to the circumstances of the occupant. One or two folds of coarse woollen cloth and a parti-colored quilt are thrown over the bed. Though these beds are narrow the Icelanders contrive to sleep double, by lying in the manner vulgarly called heads and points. Sometimes the walls are panelled with boards, but more commonly they are bare, and collect so much dust that nothing can be

kept clean. It is seldom that there is any floor, and the health of the inmates is often greatly prejudiced by the dampness of the earth. Travellers complain much of the filth and stench of the Icelandic houses, but it is questionable if they are worse in this respect than the dwellings of the Scotch Highlanders or the peasantry of Ireland.

The other front doors open into store rooms, smithies, and other offices, and there are commonly several outhouses for sheep and cattle. The whole together, with the haystacks which are always hard by, present an appearance by no means unpleasant.

A winter evening spent in one of the houses we have been describing would be highly interesting. Between three and four o'clock a lamp is lighted in the sleeping-room, and all the family, work in hand, take their stations on their respective beds. The master and mistress with their children place themselves at the inner end of the room, and the outer end is occupied by the servants.

One person takes a seat near the lamp and begins to read some ancient saga, or other history, while the rest are working. The reader is often interrupted by the members of the family, who make remarks and propose questions, in order to exercise the memory and judgment. Some have the sagas by heart, and recite instead of reading them. There are some itinerants of this description who gain a livelihood in winter by going from house to house till their stock of literature is exhausted. This custom has existed among the Scandinavians from time immemorial.

At the conclusion of the evening labors, which often continue till near midnight, the family join in a psalm, and then a chapter in the bible or some other devotional book is read. A prayer from the head of the house follows, and the exercise concludes with a psalm. Their morning devotions are conducted in the same manner. When one awakes, he goes out of doors and utters a prayer to the Supreme Being; then re-entering, he salutes every one he meets with 'God grant you a good day.'

The common horses of Iceland are sold for twenty-five or thirty shillings, and a good saddle-horse costs five pounds sterling. They are from thirteen to fourteen hands high, strong, hardy, and lively, and will carry a weight of twenty stone twentyfive miles a day. They are broken to a short, easy amble. Their sagacity is surprising. In the darkest nights, when the rider is lost, they find the way by unerring instinct over the most broken and dangerous ground, without accident.

There are abundance of sheep in Iceland, but as they in no wise differ from the sheep of other civilized countries we trust to be excused from saying any thing about them.

Reindeer were introduced into the island from Lapland by the Danish government in 1770. The climate agrees with them, and they have so multiplied that numerous herds range the island, and are seldom molested by the inhabitants. Sledges are entirely out of fashion, or they might easily be made useful, as they are docile and readily submit to wear harness.

Toward the middle of June the Icelfander prepares to visit the factory, or mercantile establishment, at which he has been accustomed to trade. These factories are established by the Danish merchants along the coast; but many of the inhabitants prefer a journey to Reykiavik, where there is a competition, and a choice, the latter being a thing of no little importance in their eyes. The price of each article is commonly fixed by the merchants beforehand.

It is the duty of the Landfoged and the Sysselman to examine all weights and measures before the trade commences; and when these are found defective, the proprietor is liable to a fine.

When about to set forth, the Icelfanders lay large square pieces of turf on their horses' backs, over which they strap a wooden saddle. They then load the animal with the articles of their traffic, and secure the whole with leathern thongs. When they reach Reykiavik they pitch their tents on the grass, near the town. The masters then leave their goods in charge of their servants, and ride into the town to make their bargains. This only applies to such as live at a distance, and are independent of the merchants; for the names of a large majority are on the wrong side of the shop books all their lives. Indeed it is the policy of the dealers to have many outstanding debts, in order to secure the future trade of the individuals indebted. They are threatened with prosecution in case of trading with any other, and are thus kept in a kind of servitude all their lives.

The exports are fish, salted mutton, oil, tallow,

wool, woollen stuffs, skins, feathers, and sulphur. The imports are ; rye, barley, oatmeal, pease, bread, potatoes, rum, brandy, wine, coffee, tea, sugar, tobacco, salt, wood, cottons, silk handkerchiefs, and so forth. The use of some of these luxuries has of late years increased beyond the means of the inhabitants.

The wants of Iceland have been supplied at different times through various channels. At the breaking out of the war of 1807, between Great Britain and Denmark, the Icelanders were apprehensive of actual starvation, from the want of absolutely necessary articles, especially hooks and lines, without which they could not live. To the immortal honor of Sir Joseph Banks, who interposed in their behalf, the British government decreed that the ordinary usages of war should not be extended to this unoffending people, and that their supplies should not be cut off.

Since the abolition of the Althing, the annual fair of Reykiavik furnishes the natives with their only opportunity, whether of meeting, or of transacting public business. The change has displeased most of the Icelanders, and in some degree lessened their pride and national feeling.

In the people of Iceland we see a proof, if a proof were needful, that the happiness of a people in no wise depends on the nature of the country they inhabit. Few persons would choose Iceland for a residence : there is nothing inviting in their barren rocks and yawning craters ; yet would they not exchange their desolate abode for any in the

world. We have reason to be proud of Iceland, as belonging to the new hemisphere. The virtue of its inhabitants, their moral and industrious habits, and their love of country, have stood the test of time longer than those of any race whatever. From all that appears, these are likely to endure as long as their island.

CHAPTER VII.

Miscellaneous Particulars.—Of the Mineral Kingdom in Iceland.—Vegetables.—Drift Wood.—Sketch of Spitzbergen.

It is but of late that the geographical situation of Iceland has been accurately determined, or that anything respecting it has been accurately known. It was not till the year 1778 that Messrs Borda, Pingre, and De La Crenne determined several positions astronomically, and ascertained the exact dimensions of the island, which have been given in another chapter.

It will, perhaps, be proper to say something of the mineral kingdom in Iceland, so far as it is known. In many places, the basalt, of which the mountains are in part composed, takes the form of immense masses of pillars, like the well-known Giant's Causeway in Iceland. Mount Akrefell contains beds of amygdaloyd, trap-tuff and greenstone; the lower surface of which has manifestly been subjected to the action of intense heat, probably at

the bottom of the primitive ocean. Of the ordinary lava there are several different formations. One of these has flowed, and in some places still flows, in blazing torrents, from active craters: another kind, of a spongy and cavernous nature, appears to have boiled up in the very places where it is found. In the numerous caverns formed by this last, the most beautiful stalactites are found. The great cave at Surtshellir, already described, is the largest of these. Its description may serve for them all.

This island may without impropriety be called the safety valve of the earth: none of its phenomena better prove how vast the mass of volcanic matter must be, than the sudden appearance of a new island, which rose up to the southwest of Reikianess, in $63^{\circ} 20'$ latitude, a little before the eruption of 1783. It threw out flames and pumice-stone; yet when search was made for it two years after, it had entirely disappeared. It appears probable, therefore, that it was merely a crust of lava and pumice, raised to the surface of the sea by a submarine eruption. Had not Iceland kept its place so long, we should be disposed to apply the same remark to it.

A very singular mineral production of Iceland is a kind of fossil wood, called in Icelandic, *Surturbrand*, the name of the black god, or Pluto of ancient Scandinavia. It is black, heavy, and slightly carbonized, burning with flame. There is another kind of mineral wood, heavier than coal, which burns without flame, and contains chalcedony in its transverse fissures.

The central mountains of Iceland, which are by

some supposed to be primitive, contain copper and iron, which are not wrought for want of fuel; also marble, lime, plaster, porcelain clay, and several kinds of bole, beside onyx, agate, jasper, and other stones. Sulphur is found in abundance all over the island, both in a pure and impure state. The most considerable mines are at Krisevig and Husavig: at the latter place there is a manufactory for refining it. The sulphur hills in the vicinity of mount Krabla have already been noticed.

Iceland produces no salt; but the surrounding sea is as deeply impregnated as the Mediterranean. The salt obtained from it, imparts a bluish color to fish.

The air is not without its prodigies. Through an atmosphere filled with icy particles the sun and moon often appear double, or distorted into extraordinary and fantastic forms. The aurora borealis reflects a thousand shades and colors, and phantom shores and imaginary seas are everywhere perceived through the magic medium of the *mirage*. Wheat was formerly cultivated in quantity sufficient for the wants of a much larger population, and the government takes great pains to revive it. But when the polar ice arrives, the hope of a crop of wheat must be abandoned for two or three years at least.

Within the space of one century the annals of the island record fortythree bad seasons, among which were fourteen years of actual famine. In 1784 and 1785, when an intense severity of winter succeeded to volcanic eruptions, one fifth of the

entire population perished, together with 190,000 sheep, 28,000 horses, and upwards of 11,000 horned cattle.

Among the vegetables of Iceland is the *Elymus arenarius*—in Icelandic, *melur*, a species of wild wheat, which may be made into good flour. Beside the lichens, there are many antiscorbutic roots. There are even several marine plants used as food, among which are the *Alga saccharifera*, and the *Fucus foliaceus*. Like Norway, Iceland produces great quantities of wild berries of excellent flavor.

Of late years gardening is practised throughout the country. Cauliflowers do not succeed, nor has the cultivation of the potato made sufficient progress for the advantage of the island.

Though Iceland now affords no better trees than birch and brushwood, the inhabitants of the sea-coast do not feel the want of fuel. The immense quantity of pines, firs, and other trees, which are thrown upon the northern coast is truly astonishing, and may be considered a natural phenomenon.

Thus what the soil denies is brought by the ocean. The wood drifts upon Cape North and Cape Langaness, in such abundance that the neighbouring inhabitants neglect the greater part of it. The pieces which are carried along these two points, by the waves, towards the other coasts, supply a sufficient quantity for all the purposes of boat-building.

The sea and rivers offer advantages to the Icelanders which they neglect. The salmon, trout, barbel, and many other fishes which abound therein, are generally permitted to live and die undis-

turbed. Eels are found in great plenty, but the Icelanders do not eat them, fancying that they are the offspring of the great sea snake, which, according to the northern mythology, encompasses the globe like a girdle. Herrings swarm round the shore, but it is only of late that nets have been used by the Icelanders. They pay more attention to the whale, the sea-calf, the sea-dog, and the cod-fish.

North of Iceland, are coasts still imperfectly known, which belong either to Greenland or to a Polar Archipelago. They have been visited only by whalers. Concussions felt at sea seem to indicate the existence of volcanoes in this quarter. The island of John de Mayen, which has often been visited, is a mass of black rocks, but without any volcanic traces.

The group of three large islands, and a great number of lesser ones, which have received the name of Spitzbergen, appear to be the termination of this icy chain, and seem, in the present state of our geographical knowledge, to belong to Greenland, and consequently to North America. The great island of Spitzbergen, properly so called, is separated by narrow channels from the southeast and northeast islands. The eastern part of the peninsula of Spitzbergen *proper* has received the name of New Friesland. Toward the northwest point, are the ruins of a Dutch whaling establishment, called Smeeringberg. The mountains of Spitzbergen are covered with perpetual snow and ice, and reflect a light equal to that of the full moon. They are composed of red granite, the

blocks of which shine in the midst of masses of ice. From their great elevation they are seen at a great distance. Solemn silence reigns in this desolate land, which has probably been uninhabited since the birth of Time. Even here the torpor of Nature is but temporary and periodical. One uninterrupted day, of five months duration, occupies the place of summer. Toward the noon of this protracted day, the long accumulated heat penetrates a little way into the frozen earth. Though the pitch on the sides of vessels is melted, only a few plants expand; such as cochleariæ, ranunculuses, sedums, and poppies. The bays are full of gigantic fuci and algæ, one species of which is more than two hundred feet long. Whales and phocæ disport in these marine forests, and there seek for their accustomed nourishment of mollusca and little fishes. Here are seen the walrus, and the narwhale; and here the sword-fish battles with the whale. Here also the colossal polar bear abides, amidst flocks of foxes and herds of rein-deer. All these animals present temptations to European enterprize. Within fortysix years the Dutch caught 32,900 whales on the coast of Spitzbergen, which were worth fourteen millions sterling.* At present, however, the animals are fewer, and the value of the fishery is much diminished. All these enormous creatures are less useful than the herring, of which the polar circle appears to be the birth-place. Here it is secure from the assaults of its enemies.

The vast abundance of floating wood that drifts

* Anderson's History of Commerce.

upon all these northern shores, has given cause for much speculation. It appears to be the produce of the northern coasts of both continents, and of the regions bordering on the Gulf of Mexico. The latter is brought hither by the Gulf Stream. Yet if a part of this floating timber comes from forests now in existence, another part is supposed to have its origin in some of the great revolutions of the globe. In Siberia great masses of wood are found deposited at a height to which the present ocean could never have reached. Gmelin imagined that he saw in this a proof of the diminution of the sea ; and many other hypotheses have been stated by different philosophers. We pretend not to give an opinion on the subject, farther than that many of the appearances of the northern regions could not have been produced by the present state of things.

GREENLAND.

CHAPTER I.

General Geographic Features of the Coast of Greenland.—Of the Western Coast.—Of the Eastern Coast.—Fredericshaab.—The Ice Blink.—Gothaab Disko Bay.—Lievely.

THE most southern point of Greenland is Cape Farewell, situated in latitude 59° north. From this point of departure many navigators have coasted its northeastern shore as far as within ten degrees of the pole, and its northwestern border to the seventy-eighth degree. No vessel has ever gained its northern extremity, nor is it certain that any communication exists between Baffin's Bay and the sea on the northern shore of the new continent. There are therefore no means to ascertain whether Greenland is joined with America, or is an island, or a part of a polar continent. In the northwestern part of Baffin's Bay the late navigators have discovered that strong currents run eastward from the different inlets, and this with other circumstances seems a reason to believe that the land is not continuous from Greenland to America.

The shore of Greenland on the western side, as far as Disko, is high, rugged, and barren, rising from the

water's edge into tremendous precipices and lofty mountains, which may be seen from the sea more than an hundred miles. All the hills are crowned with everlasting ice and snow, which increase in quantity from year to year, and are continually filling the vallies. Those rocks on which the snow cannot lie are grey, streaked with colored veins, with here and there a little earth which affords nourishment to a hardy species of heath. In some of the vallies there are small brooks and ponds, fringed with a growth of stunted brushwood. North of Disko little is known of the coast, excepting that it is mountainous, and bordered with numerous clusters of small islands.

The eastern coast of Greenland beyond Herjolf's Ness is absolutely unexplored. A perpetual barrier of ice precludes the attempt. It is from hence that those fields of ice which so often shut up the ports and bays of Iceland break away. The general features of this shore are like those of the western side. Herjolf's Ness is a bold rocky promontory, and the precise position of any point beyond it is doubtful. It is no great risk to assume as a fact, that Greenland, on the eastern side from Herjolf's Ness to the pole, is decidedly unexplored, and the reports of experienced seamen are positive in expressing the impossibility of coming within many degrees of the supposed line of coast, from the continual presence of ice; and that the ice which is carried to the southward from the Greenland fishing grounds is always limited to a certain meridian, westward of which it has never been known to

break up. Eastward of this parallel they have at times penetrated beyond the eightyfourth degree.

South and westward of Herjolf's Ness, is Skagafjord, a sound the termination of which was never ascertained; but from its apparent direction, it is thought to have a communication with Makkely On-it, in South East Bay at Disko.

Between Herjolf's Ness and Staten Hook there were many more inlets inhabited in former times. Whether these inlets may not have a leading into the preceding communication, must not be looked upon as at variance with probability.

No one now will doubt that Frobisher's Straits penetrate the whole of southern Greenland, or rather open into some vast internal sea, whence the ice is annually carried westward, so as to obstruct the entrance to these parts from the side of Hudson's Bay.

Staten Hook and Cape Farewell have been both determined to be islands, between which there lies an immense bay, crowded with islands. The bottom of this, never having been yet explored, may be supposed to have many inlets, branching into Frobisher's Straits.

Let us turn our attention to Baal's River, which is rather a gulf, penetrating Greenland to the north-east. The extremity of this water has not been as yet laid down. It is supposed to extend to Disko, by some inlet leading into Southeast Bay. In its length it is impossible to deny but it may have communication with Skagafjord and the inland waters in Frobisher's Straits.

Whether South Bay is connected with Baal's River is not easy to assert, as there is no datum for such assertion.

Makkely Onit in Southeast Bay has been always considered as running into a water, which, if free from ice, would permit a passage into the northern Atlantic.

North of Makkely Onit are numerous passages opening into internal seas in the northern parts of Greenland, some of which have been penetrated by the boats of whale fishers, the men of which, on their return, invariably reported that they had observed fair, open seas before them, after they had gone a very little way.

In Jacob's Bay there is one very remarkable passage of similar description ; and also one, if not more, in Northeast Bay ; and proceeding farther north, the numerous sounds up to the Woman's Islands, and forward to the Devil's Thumb, an isolated natural column, in $74^{\circ} 53'$ north latitude, various openings present themselves, which, no doubt, lead to so many ways of traversing this Arctic Archipelago.

A few circumstances more will materially assist in this inquiry. The whale fishers are unanimously of opinion that Greenland consists entirely of islands ; 'for,' say they, 'whenever chance or inclination led us, on almost any part of the coast, we saw nothing to prevent us from sailing as far inward as we liked.' The habits of the whale, who is always observed running for some of these passages, and some, when stricken, dragging the

boats so far that the people witnessed open clear water to a boundless extent, are in a great degree confirmatory evidence of the fact. But one circumstance, not the least curious in natural history, is, that a whale, struck by a man at Greenland, i. e. at Spitzbergen, escaped, and was in a short time after killed, and taken by a relative of the same man, who was then at Davis' Straits. This curious fact was determined by the harpoon, bearing the mark of the former, being found in the body of the animal when taken.

The Northeast coast of Greenland, therefore, being unexplored, and the probable intersection of its southeastern, southern, western, and north-western parts by navigable waters being adduced, besides the other circumstances in aid, it may, we presume, be inferred, that the state of Greenland is not continental, but insular. But whether the research will be ever established by further proofs of more decisive character, or whether any circumstances will warrant the hazard, must be left for time to determine.

Nature, in denying this dreary continent or archipelago trees for fuel or the purposes of domestic architecture, made ample provision, in the drift wood which floats to every part of its shores. Of salt water there is an abundance; but the country seems to be ill supplied with fresh. The few brooks that are known to exist are formed by the melting of the snows.

The Danish establishments in Greenland consist of several factories, scattered along the coast, and

divided into two departments, over each of which an inspector presides. Coasting to the Northwest from Cape Farewell, the first is Julianshaab, and then Fredericshaab, upon a projecting point of land. It was founded in 1742. There is a good harbor about a mile from the sea, and an island where the aborigines resort to hunt seals and rein-deer.—Fredericshaab is an eligible place for trade.

Nine leagues from this colony is the well known Ice Blink. It is a vast elevated sheet of ice, reflecting a brightness over the sky resembling the Northern Lights. The mouth of the adjoining bay is blocked by ice driven out by the efflux of the tide, and so wonderfully heaped by the waves that the spaces between the islands are completely vaulted over, and present the sublime spectacle of an enormous bridge of ice, eighteen miles long, and nearly five broad. Boats may enter the harbor under the arches, which are from sixty to an hundred and eighty feet high. The mouth of the bay is closed, but there is a sheet of open water within.

Proceeding onward, we come to Gothaab, in latitude $64^{\circ} 14'$. It stands in Baal's River, the inlet before mentioned. There is a church at this colony which was founded in 1721 by the famous missionary Egede. Some thousands of the natives formerly dwelt in this vicinity; but in 1733 the ravages of the small pox thinned their numbers, and their population has been on the decline ever since.

Passing the colonies of Sukkertoppen and Holsteinburg, we come to Disko Island. It is table land, the interior parts more elevated than the sides.

From the great distance at which it first becomes visible above the horizon, this island must be more than a mile in perpendicular height. The face of the rock is worn into channels, for the discharge of the dissolved snow, which, as they grow narrower in their descent, give the spaces between, the appearance of stupendous pyramids, a resemblance which is heightened by the stratification exhibiting horizontal and parallel fissures, similar to regular building. The rock is basaltic, but not of that regular form which occurs in the Giant's Causeway. Its height is 60 feet. There are parts however where the stratification is much more regular.

These remarks chiefly regard the south side, about Fortune Bay, which seems to be that part of this island which has been least afflicted by that awful convulsion which at some remote period denudated and destroyed this portion of the globe. Probably the ruin that came upon these countries, moved, in its terrible progress, from the northwestward; and, having forced a passage through the Waygat Strait, swept round through the southeast bay, and so spared Disko. In support of such conjecture, it may be advanced, that Hare Island, lying nearly north of Disko, at the entrance to Waygat Sound, is low and flat, as it were the base of a mountain whose summit had been torn away. The contiguous point of Disko shelves into the sea, as if having suffered from the same cause; whilst that side of Disko that overlooks the Waygat consists of lofty peaks, behind which there lie deep valleys, where the torrent rioted, having failed to carry away the more elevated

parts. Moreover, that part of Disko called Flat Foot Shore, which lies over against Makkely Onit, has evidently suffered during the same devastation. Neither would those portions of the island called New and Old Lievely have survived the wreck, were it not for the strong resistance made by that part which is known by the name of the Black Land. The rock of Lievely, now so dangerous to navigators, which is bare at low water spring tides, and which is nothing but the remains of some part of the mountain, is a further proof of the justice of the above position. The existence of Disko Bay, Fortune Bay, Love Bay, and the other recesses in the bosom of this remarkable rock, owe their existence to the violence of the flood, which, boiling at the resistance opposed to it on the north side, rushed over the higher lands to the southward, and there pouring onward, in its rage hollowed out these several bays, and meeting with the other contending currents coming through the Waygat, and down the Straits, completed the work of destruction, and effected the formation of Southeast Bay.

Disko Bay is an hundred and twenty leagues in circuit, and has the most productive fishery of any in Greenland. There are several settlements on and about the island, the principal of which is Lively.

The harbor of Lively is excellent for small vessels, having a good depth of water, and being quite landlocked; but it appears rather narrow for ships of three or four hundred tons. The settlement is principally situated on the south shore of the harbor, where there are several tolerably built wooden

houses, among which that of the inspector is a good looking and convenient one. There are but six or seven Danes, besides the officers, belonging to the establishment, most of the Esquimaux going, in the summer, into the interior, to kill rein-deer, from which occupation they do not usually return till September or October, when their services begin to be needful in the whale fishery, which is carried on here only in the winter months. A small schooner, which is kept in the harbor, is sent every summer to bring the oil from the northern settlements, in readiness for the arrival of the vessels which come annually for the purpose of taking that article to Copenhagen; and at the same time carries out supplies of provisions and other stores.

Beside all these, there are other colonies, to the number, perhaps, of twenty, which to describe would be but repetition.

CHAPTER II.

Of the Polar Ice.—Changes in its Position.—Its present Position.—Technical Names of the different Kinds of Ice.—Dangers from Icebergs.—Manner of taking the Whale.

IN no part of this work can the polar ice, the great sole obstacle to the navigation of the arctic regions, be discussed with more propriety than here. It fills, it appears, together with the land, a circle of above two thousand geographic miles in diameter, and bars all access to the tract immediately sur-

rounding the pole. Though subject to partial variations, its outline is generally, at any season, similar to what it was the year before, and often strikingly uniform.

A great change in its position, as far as it regards Greenland, took place in the beginning of the fifteenth century, whereby the intercourse between Iceland and the colonies then established in Greenland was interrupted, and the colonies probably perished; for nothing has been seen or heard of them since. Until that time, the coast had always been accessible, but the polar ice, as it is supposed, suddenly extended its limits to Cape Farewell, and rendered the shore inaccessible. Another and a lesser change took place in 1816. A portion of about two thousand square leagues of ice drifted out of the Greenland sea, from between the parallels of 74° and 80° .

With each recurring spring the ice presents nearly the following outline: it covers the eastern coast of Greenland, extends by Labrador to Newfoundland, fills the bays of Hudson and Baffin, and exhibits a broken but continuous edge from Labrador to Nova Zembla. During the winter, it usually adheres to the northwest coast of America, fills Bhering's Straits, and, it is supposed, adheres to the shore from Icy Cape to the eastern extremity of the American Polar Sea. It would seem that a perpetual barrier of ice, sometimes fixed and sometimes loose, crosses the middle of Baffin's Bay.

Perhaps it may not be amiss to give here the denominations by which the different kinds of ice

are known to arctic navigators. Those stupendous masses, which from their height, bulk, and irregular and picturesque outlines, strike the beholder with admiration as well as terror, are called *icebergs*. Those prodigious sheets whose want of altitude is made up by their extent, are called *field ice*. A field whose extent can be seen from the mast head, is denominated a *floe*, but this term is seldom applied to pieces less than a mile in diameter. *Drift ice* consists of pieces less than floes, of all shapes and magnitudes. *Bay ice* is that which is newly formed on the sea; and *sludge* is small particles of ice, or snow, from which floes and fields are formed.

A *hummock* is a protuberance on a floe, or field, commonly formed by the pressure of one piece upon another; and a *calf* is a depression from the same cause. Calves are sometimes so deep and broad that a ship may sail over them without touching. A *tongue* is a point projecting, under water, from some mass of ice, horizontally. When there is so much drift ice that its extent is not discernible, it is termed a *pack*, and is said to lie *open* when the pieces do not touch; and if the reverse, it is called *close*. *Young ice* is that which is forming, or has been newly formed. Though formed of salt water, the sea ice is not commonly in itself salt.

It is yet a question whether ice can form in any part of the ocean, excepting under the lee of the land. The swell and motion of the waves is certainly unfavorable to its generation; nevertheless, it is certain that bay ice does form at sea to an extent sufficient to arrest the progress of ships. Perhaps

the most rational conclusion is, that a part is formed in the bays within the arctic circle, and a part in the open ocean.

When two fields of ice meet in rapid motion, the concussion is terrible. The weaker field is crushed with an awful noise; sometimes the destruction is mutual; pieces of huge dimensions are piled up to the height of twenty or thirty feet, while a proportionate quantity is forced under. The strongest ship is but an insignificant impediment between two moving fields. Numbers of whaling vessels have been thus destroyed; some have been thrown upon the ice, others have been torn open or broken to pieces, and some have been completely overthrown and buried beneath the fragments. As many as twentythree Dutch ships have been thus lost in one year.

Icebergs have been seen of almost incredible dimensions. Captain Ross saw one twelve hundred feet long, and three hundred and twenty feet high above the water. Another was estimated to weigh 1,292,397,673 tons. Icebergs commonly float on a base much more extended than their upper surface. Hence the proportion appearing above water is seldom less in elevation than one seventh of the whole thickness; and when the elevation is conical, it is often equal to one fourth of the whole depth of the berg.

Icebergs are seldom dangerous, as they can be easily distinguished in the night, though fatal accidents have occurred from running upon them. They are sometimes valuable friends to the whale fishers.

They do not move so fast to leeward in gales as the drift ice, and vessels are frequently moored to them, while the loose floes and fields are passing, and thus lose less ground. In strong adverse winds, they hinder ships from making lee-way.

All ice becomes fragile toward the close of the whale fishery, and grows loose in its texture. Bergs in this state being struck with an axe for the purpose of fixing an anchor, have been known to split asunder, and precipitate the seamen into the chasm; while occasionally the masses have fallen in contrary directions, burying men and boats in one common ruin. But to rehearse all the possible, probable, or certain dangers of arctic navigation, would require a much larger volume than this.

The formidable barrier already described, when it occurs, is regularly encountered by the whale ships, in the month of April, but is usually removed by natural means as the season advances. In May the ice becomes porous and decays, the drift ice is liberated, and before the end of the month the winds and waves break up the whole mass. Ships do not, however, wait for this event, but penetrate the ice under sail, and by cutting and sawing a passage.

Whales are seen in the open sea, or in the holes between the masses of ice. White whales are seldom seen but in open water. Of the whole tribe of this species, the *balæna mysticetus*, or common black whale, is the most inveterately pursued by man. An account of the manner of taking whales, naturally follows here.

Every ship engaged in this branch of commerce,

from British ports, is furnished with six boats, besides the ship's, or jolly, boat. One of them is called the gig-boat, or No. 1: the remaining five are distinguished only by their number. The gig is provided with six oars, besides the steersman's; the rest have only five oars each, with the same exception: in all, the harpooner uses the bow or foremost oar. Each boat is provided with three lines, of 120 fathoms each, made of the very soundest hemp, as on the faithfulness of the line the success of capture depends. These lines are coiled with great care and nicety, in a square frame in the middle of the boat, and the harpooner has his weapon ready in a dry place, to set it on a seat prepared for that purpose on the right bow of the boat. The boat-steerer, who must be trained to his station, as, in emergency, his courage and caution may not only secure success, but save the lives of the men, is provided with a long oar, with which he dexterously directs the motion of the boat. Each boat is provided with a tin trumpet, to announce the station or movement in case of being enveloped in a fog, and also with a piece of bunting attached to a short pole by way of signal flag.

Thus equipped, the boats are suspended by a simple machinery of blocks and ropes by the ship's sides ready to be lowered in an instant. To the main-mast, is attached, at a great elevation, usually about 100 feet above the deck, a structure resembling a water-cask, called a crow's nest, or hurricane-house, in which the master or confidential officer is stationed with a telescope on the look-out; and to such as have

not witnessed the fatigues of that station, a recital of its dangerous hardships would appear incredible. In the sudden transitions from intense cold to the most annoying heat, whilst the head is involved in the blaze of an eternally unclouded sun, that blisters the face and blinds the strongest vision, that situation must be inflexibly maintained, and such perseverance often costs the individual the loss of health and life.

If the ship's station be on what is considered good fishing ground, which is commonly known from the water being of a deep olive colour, a boat or two being kept continually on the watch, the moment a whale is descried, the pursuit is commenced without loss of a second of time; and as the ordinary speed of the whale-boats is six miles an hour, a very short space of time is sufficient to bring them to the spot. The whale, on first rising, seeing no enemy near, and not apprehending danger, is apt to repose a considerable time at the surface, apparently 'stretched out o'er many a rood,' and the boats are meantime advancing to the place. 'Give way,' is then the word with which the rowers urge their speed, and the harpooner, with desperate and determined energy, buries his weapon in the animal's body. This is usually followed by a moment's awful pause; the whale, upon feeling the smart of the barb, trembles for an instant in his posture, darts precipitately forward, or sinks by an unaccountable effort with the suddenness of so much lead. If the harpoon remain fast, the line continuing to run with immeasurable velocity, the flag of the boat is displayed in

token of success, when all in the boats within sight of the transaction, and those on board the ship, join in a wild irregular cry of 'A fall, a fall,' and a flag is immediately run up to the mizen-mast head, to proclaim the vessel's good fortune.

In the mean while the other boats are despatched to aid in the capture ; and no sooner does the animal rise again, than the next harpooner secures him by a second wound, and so as many follow as can, until by multiplied efforts to escape, compelled to rise for breath, and then almost instantly visited with the instruments of death, exhaustion follows, and he becomes a bestunned object for the hunter's deliberate aim, when, from the numberless plunges of the lance, the vital current becomes spent, and the animal dies. Such an event is not always unattended with danger to the fishers.

Often in the first instance of being stricken, if recollection of similar injury aid its anger, the retaliation of the animal is destructive, for, rushing backwards, in which direction the assailants usually advance, a single touch of the tail is sufficient for their destruction. The sudden violence with which the animal descends, frequently produces a similar effect if the line happen to meet obstruction in its course ; and in the dying scene, pierced with many wounds, the animal exhibits a terrific object by the mightiness of his efforts, though quite unconscious of the grand effects produced by such exertions. Spouting a column of apparent flame, which, descending, covers the sea with a crimsoned surface of acres in extent, at the same time lashing the

water all around into foam by the strokes of the fins and tail, now and then endeavouring to replunge in hopes of escaping, in which effort half of the body, towards the tail, is seen above water. The danger so obvious is carefully avoided by the boat's crew, at that crisis cautioned to remain at a secure distance, when the lines fastened to the harpoons are slowly drawn in, till the animal reappears and breathes his last.

The whale, after death, always turns on his back. The fins are then lashed together, perforations are made in the tail, and a rope is passed through, and thence round the rump ; when all the boats, passing lines from one to the other, proceed to tow the carcass towards the ship, which is usually so managed as to meet them, in order to lessen the fatigue. When brought alongside, the body is properly secured for the operation of flinching. This consists in digging off the blubber, or cellular substance, from the muscular parts, in large slips, sometimes of half a ton weight, but all of a regular form, which are lifted on deck by the help of the windlass, and the labor of many hands, who toil incessantly until the spoliation is completed. The whalebone, as it is called, is carefully dug out, as well as the massy tongue ; the former for its peculiar importance, and the latter as being almost entirely composed of blubber. The bones of the lower jaw are also removed, being a private perquisite of the Captain ; and so would be the frontal or crown bone too, were it not for the extreme difficulty of separating it from the body. Then finally the remotest joint that can be

marked in the lumbar vertebræ or rump, is severed, and the crang, the residue of the animal, as it is called, with its abdominal contents, is suffered to sink, which it instantly does, to the bottom.

When the flinched pieces are hoisted on deck, they are cut into squares, and tossed into the body of the vessel, where they remain for a convenient opportunity of reducing them to hand-breadth slips, which is done by chopping them, upon portions of the tail, with heavy knives; and this procedure, which is called 'making off,' is final for the transmission of blubber to the English ports from the fishing grounds. The reduced pieces are for that purpose placed in large casks, and closely bunged up, to prevent the action of the air from producing the process of putrefaction.

During the foregoing operations, the utmost precautions are observed that no portion of muscular flesh be mixed with the cellular parts, as the violent explosion of the cask would be the consequence, when coming into southern climates. Similar concern is also evinced that the sawdust should not have admission into the casks containing the blubber, from an experience that the casks in such case are more certainly burst by the evolution of gasses in an earlier stage of putrefaction, than even by the presence of the former. To prevent the first from happening, the muscular parts, and skin, are carefully cut away in the 'making off,' and the saw-dust is employed so cautiously and in such small quantities, that no abuse of that dangerous material can be apprehended. The chief reason why saw-dust

is used, is for the purpose of drying up the oily effusions that incommode the men in the use of the respective implements necessary to effect the operations of flinching and making off. The use of fir-timber dust on such occasions cleanses the hands and instruments, with a ready and efficient result; and the ship boys are stationed so as to supply the demands of the officers in this respect.

The integuments of the whale are, like the animal himself, widely different from those of every other creature. The epidermis is like thin parchment, flexible when on the body, easily detached, wrinkled according to the age of the animal, and corresponding with the organization of the muscles beneath; but, when dry, it is horny and brittle, and in consistence similar to the finer lamina of the whalebone. The true skin is about an inch thick in its full character, and is formed of a material analogous to the whalebone, but breaks, when dry, in perpendicular fissures: it is usually a deep brownish black, and, when soft, strongly resembles gum elastic. In composition it seems to differ very little from the substance that constitutes the matricular bed of the whalebone; the white color of the latter forming the only distinction, except that its fracture is shelving. The cellular tissue, or blubber, is, in its average thickness, twelve inches; in the very young whale, being gelatinous—in the more advanced and vigorous, of a florid red, when it is considered most valuable; and in the aged animal, yellow and tough, from the induration of increased and condensed fibre: for which reason, the

older whales are not so much an object, where choice presents, as those of less advanced growth.

The older ones are also more dangerous and difficult to take, both from the rigidity of their frame, and their experience of injury. It is not unusual, when they happen to be disturbed in the pursuits that draw them from their retreats, that, if a partner be wounded, the affectionate companion comes to give relief, not knowing the cause of the pain, or of the sudden flight. In the search, the watchful fisher strikes the new prey, when the tortured animals, seeking each other in their anguish, and desperate with their wounds, often run foul of the boats, and involve their pursuers in the ruin that overwhelms themselves. In some instances, as heretofore observed, they, by running among packed ice, or rubbing the line against the edge of a flaw, (a portion of field ice,) frequently chafe it so as to make it snap, and so escape for the moment; but they are seldom eventually safe. On such occasions, they cease not to run for an unknown length, until fatigue or death makes them insensible of pain. To some such occurrence is to be attributed the circumstance of a whale being captured with a harpoon imbedded in its body, after traversing the unknown seas between Spitsbergen and Davis' Straits.

CHAPTER III.

Early History of the Whale Fishery.—Of the Manner in which a Whale Ship is manned.—The Crow's Nest.—Whale Boats.—Implements used in the Whale Fishery.—Whale Killing.—Danger of Striking.

It is on record that whale fishing was followed as a regular occupation as early as in the reign of Alfred the Great; but wherever it might have been conducted in the time of the Saxon monarch, it is certain that the Icelanders were the first people that plied the harpoon in the seas of Greenland. They united their means with those of the Biscayan whalers, and in the latter part of the sixteenth century the two nations employed fifty or sixty vessels annually, in this branch of commerce. England sent no ship to fish in these unknown waters till the year sixteen hundred and eleven. The Dutch followed four years after. All the early adventurers manned their ships with Biscayans, as the only persons qualified in hardihood, courage, and experience, to conduct the business. There were two principals in each ship, one of whom had the charge of the ship on her passage to and from Greenland, and the other, who was always a Biscayan, had the unlimited control of the fishery. In the course of time, other people equalled the Biscayans in skill, and they lost their exclusive employment.

The office of chief harpooner, which requires great courage and consummate experience, is confided, in the Greenland whale ships, to a person

called the *specksioneer*. It is the specksioneer's duty to superintend the extraction and boiling of the fat.

The crew of a Greenland whaler usually consists of forty or fifty persons, comprising masters, harpooners, boat steerers, line managers, carpenters, coopers, foremast men, and apprentices. Each individual, from the master to the boys, receives a gratuity for every fish stricken, or for every ton of oil made, as a stimulus to exertion. Masters and harpooners receive a small sum before sailing, in place of monthly wages; and if they procure no cargo, they must expect nothing beside for their voyage. In the event of a successful voyage, they have considerable advantages. The master receives three guineas for each size fish, and as much for striking a size whale, or for discovering a dead one, beside from ten to twenty shillings per ton on the oil made, and commonly a twentieth, or at least a thirtieth of the value of the whole cargo into the bargain. While he remains on shore, he has five pounds a month for his attendance on the ship. Each harpooner has six shillings a ton on oil, and half a guinea for every size fish he strikes during the voyage. In addition to this, the chief mate, who is usually also a harpooner, has two guineas a month while at sea, and a guinea for each size fish. The specksioneer has half a guinea a fish, and sometimes a trifle on every ton of oil. The boat steerers, foremast men, &c., all receive some small premium on every ton of oil made.

The *crow's nest* is an apparatus placed at the top-gallant-mast head, as a watch tower for the use of the

man on the look out. In difficult situations in the ice, his presence may be required in the crow's nest for hours together, even when the temperature is twenty degrees below the freezing point, or more. For the preservation of his health, as well as for the sake of comfort, a piece of canvass is stretched round the base of the top-gallant-mast rigging, or a kind of canvass cask is put up to protect him from the wind. The entrance, in the latter case, is through a trap in the bottom. The crow's nest is furnished with a seat, a telescope, a speaking trumpet, and a rifle gun. The latter is to kill narwhales, which cannot easily be shot from the deck on account of the resistance of the water horizontally. Firing almost perpendicularly downward from the mast head, is oftener successful.

The dangers to whale ships are manifold, and beside the risk of being wrecked, they are sometimes beset by the ice, and compelled to winter in it. Such events do not occur so frequently in modern times as formerly, though the fishery is carried on in higher latitudes. This is to be attributed to the extraordinary exertions of the whalers. They seek the most protected situations, keep a constant watch, and remove their ships on the first approach of danger. If so beset as to be unable to move, they saw channels through the solid ice, into which they push their vessels, and commonly preserve them.

A well constructed whaleboat floats lightly on the water, is capable of being rowed with great speed, and of being speedily turned—carries six or seven men, seven or eight hundred weight of lines,

with various other materials, and yet retains the properties of safety, buoyancy and celerity, either in smooth water or in a considerable sea. A 'six oared boat' is about twentyseven feet long, and near six feet broad. These boats are built of fir boards upon an oaken frame, and in such a manner as to be easily repaired when damaged. The bow and stern are both sharp, and the keel is depressed in the middle for greater convenience in turning.

As harpoons may be seen in every ship-chandler's shop, there is no need of describing them here. Another weapon used to despatch the whale is the lance, which is an iron spear, six feet long, with a wooden stock or handle of the length of four feet. These two weapons, with the necessary appendages of boats and lines, are sufficient for the capture of the greatest whale that ever swam. There is, beside, a kind of harpoon which is shot from a gun, but being difficult to adjust, it is seldom used. Every boat is fitted with two harpoons, six or eight lances, a flag for signals, and an axe to cut the line in case of accident. The boat is steered with a long oar, for reasons too obvious to require explanation.

The harpooner rows the bow oar. It is his duty, as his title implies, to strike and despatch the whale, and, to guide the lines. He has command of the boat. The boat steerer is next in command, and intimates the motions of the whale to the harpooner.

A whale swimming near the surface of the sea leaves behind him an eddy resembling the wake of a ship, by which his course may be traced, as well

as by the flocks of birds that follow, and hover over him.

When a whale lies still upon the water, unconscious of the presence of its enemies, the harpooner commands to row the boat directly upon it, and the instant before the boat touches, buries his harpoon in its back. But if, while the boat is at a small distance, the animal indicates an intention to dive, by raising its head and then plunging it under water, raising its back till it appears like the segment of a sphere, the harpoon is thrown from the hand, at the distance of perhaps ten yards. Then is the moment of danger: the wounded whale, in its surprise and agony, makes a convulsive effort. The boat is liable to receive terrible blows from its head or fins, but more especially from its tremendous tail, which sometimes involves boats and men in common destruction. The head of the whale is avoided as impenetrable, but any part between the head and tail will admit the whole length of the harpoon.

The first effort of a 'fast fish,' or one that has been struck, is to escape from the boat by sinking under water. After this, it dives directly downward, or appears again near the surface at a little distance, and swims with great celerity towards any neighbouring ice that may afford it an imaginary shelter. Sometimes it shows its bulk above water, and gives evidence of its pain by convulsive throes, beating the water with its enormous tail and fins. The downward course of a whale is, however, the most common.

A whale struck near the edge of a large sheet of ice, and passing under it, will sometimes run all the lines out of a boat in ten minutes. When this happens, and there is no other boat nigh to assist, the whale, harpoon, and lines are sometimes all lost together. In such cases, to retard the whale as much as possible, it is usual for the harpooner to cast one or more turns of the line round a kind of post called a bollard, which is fixed at the bow of the boat for that purpose. The friction of the line would set fire to the bollard, if the harpooner was not careful to keep it constantly wet. In the capture of one whale, a groove is sometimes cut in it an inch deep.

CHAPTER IV.

Farther Account of Whale Killing.—Length of Time required to kill a Whale.
—Character of the Whalemén.—Anecdotes of the Greenland Fishery.

THE utmost care and attention are necessary while the line is running out. Fatal consequences follow the most trifling neglect. When the line becomes for an instant entangled, the boat is drawn under water, and if no other boat or piece of ice be at hand, the crew have to swim for their lives. To provide against such accidents, as well as to have additional lines in readiness, it is usual for two boats to go in company.

After a whale has been struck, the average ve-

locity of his descent for the first three hundred fathoms is ten miles an hour, and his stay under water is about thirty minutes. The faster he descends, and the longer he remains under water, the greater is his exhaustion, and the consequent facility of his capture. As soon as he reappears, the assisting boats approach, and plunge as many harpoons into him as possible. The noise made by his tail in his dying struggle may frequently be heard several miles.

Whales are sometimes captured, with a single harpoon, in the space of fifteen minutes. Sometimes they resist fifty or sixty hours, and at times they will break three or four lines at once, or tear themselves clear of the harpoons by the violence of their struggles. Generally the capture of a whale depends on the activity of the harpooner, the state of the wind and weather, or the peculiar conduct of the animal itself. Under the most favorable circumstances, when the whalemén are very active, the ice very open, or the sea clear of ice, and the weather fine, the length of time does not exceed an hour. The general average, in every variety of circumstances, may be stated at two hours.

There is no difference in the mode of killing large and small whales. The capture of a small whale is easiest; but it sometimes happens that a young fish gives more trouble than a full grown one. It is not uncommon for a small whale to run downward till it is completely exhausted, and being unable to return to the surface, to suffocate in the water. It is necessary that a whale thus *drowned*

should be drawn up by the line, which is a tedious and laborious operation. To guard against this, its descent is resisted by a tight steady strain on the line, and also by pulling, the instant it stops, in order to increase the pain, and thereby induce the animal to return to the surface, where it can be slain and secured without farther ado.

Instances have occurred where whales have been taken without being struck at all, simply by entangling themselves in the lines that had been used to destroy others, and struggling till they were drowned or died of exhaustion.

It would be unjust to conclude this subject without mentioning the singular courage and intrepidity evinced by the men employed in the capture of the whale. Trained to the occupation from boyhood, and induced by rewards of much importance in their stations, such qualifications are highly recommendatory in their application for employment; and in their voyage, should 'good luck' attend their exertions, and an implicit devotedness to the interests of the owner be evinced, their advancement and emolument are certain. Some instances of their risks and adventures will convey a better idea of these matters than anything we can write on the subject.

On the eighth of July 1813, the ship *Esk* lay by the edge of a large sheet of ice, in which there were several thin parts, and some holes. Here a whale being heard blowing, a harpoon, with a line fastened to it, was conveyed across the ice, from a boat on guard, and the harpooner succeeded in strik-

ing the whale, at the distance of three hundred and fifty yards from the verge. It dragged out ten lines, (2400 yards) and was supposed to be seen blowing in different holes in the ice. After some time it made its appearance on the exterior, and was again struck, at the moment it was about to go under the second time. About an hundred yards from the edge, it broke the ice where it was a foot thick, with its head, and respired through the opening. It then pushed forward, breaking the ice as it advanced, in spite of the lances constantly directed against it. At last it reached a kind of basin in the field, where it floated on the surface without any incumbrance from ice. Its back being fairly exposed, the harpoon struck from the boat on the outside, was observed to be so slightly entangled, that it was ready to drop out. Some of the officers lamented this circumstance, and wished that the harpoon might be better *fast*; at the same time observing that if it should slip out, either the fish would be lost, or they would be under the necessity of flinching it where it lay, and of dragging the blubber over the ice to the ship; a kind and degree of labor every one was anxious to avoid. No sooner was the wish expressed, and its importance explained, than a young and daring sailor stepped forward, and offered to strike the harpoon deeper. Not at all intimidated by the surprise manifested on every countenance at such a bold proposal, he leaped on the back of the living whale, and cut the harpoon out with his pocket knife. Stimulated by his gallant example, one of his companions proceeded to

his assistance. While one of them hauled upon the line and held it in his hands, the other set his shoulder against the end of the harpoon, and though it was without a stock, contrived to strike it again into the fish more effectually than at first! The whale was in motion before they had finished. After they got off its back, it advanced a considerable distance, breaking the ice all the way, and survived this novel treatment ten or fifteen minutes. This daring deed was of essential service. The whale fortunately sunk spontaneously after it expired; on which it was hauled out under the ice by the line and secured without farther trouble. It proved a mighty whale; a very considerable prize.

In 1822, two boats belonging to the ship *Baffin* went in pursuit of a whale. John Carr was harpooner and commander of one of them. The whale they pursued led them into a vast shoal of his own species; they were so numerous that their blowing was incessant, and they believed that they did not see fewer than an hundred. Fearful of alarming them without striking any, they remained for a while motionless. At last, one rose near Carr's boat, and he approached, and fatally for himself, harpooned it. When he struck, the fish was approaching the boat; and, passing very rapidly, jerked the line out of its place over the stern, and threw it upon the gunwale. Its pressure in this unfavorable position so careened the boat, that the side was pulled under water, and it began to fill. In this emergency, Carr, who was a brave, active man, seized the line, and endeavoured to relieve the

boat by restoring it to its place ; but, by some circumstance which was never accounted for, a turn of the line flew over his arm, dragged him overboard in an instant, and drew him under the water, never more to rise. So sudden was the accident, that only one man, who was watching him, saw what had happened ; so that when the boat righted, which it immediately did, though half full of water, the whole crew on looking round inquired what had become of Carr. It is impossible to imagine a death more awfully sudden and unexpected. The invisible bullet could not have effected more instantaneous destruction. The velocity of the whale at its first descent is from thirteen to fifteen feet per second. Now as this unfortunate man was adjusting the line at the water's very edge, where it must have been perfectly tight, owing to its obstruction in running out of the boat, the interval between the fastening the line about him and his disappearance could not have exceeded the third part of a second of time, for in one second only he must have been dragged ten or twelve feet deep. Indeed he had not time for the least exclamation ; and the person who saw his removal, observed that it was so exceeding quick, that though his eye was upon him at the moment, he could scarcely distinguish his figure as he disappeared.

As soon as the crew recovered from their consternation, they applied themselves to the needful attention which the lines required. A second harpoon was struck from the accompanying boat on the raising of the whale to the surface, and some lances

were applied, but this melancholy occurrence had cast such a damp on all present, that they became timid and inactive in their subsequent duties. The whale when nearly exhausted was allowed to remain some minutes unmolested, till having recovered some degree of energy, it made a violent effort and tore itself away from both harpoons. The exertions of the crews thus proved fruitless, and were attended with serious loss.

In 1802, the *Raith* of Leith, while prosecuting the whale fishery on the coast of Labrador, discovered a large whale at a short distance. Four boats were despatched in pursuit, and two of them succeeded so well in approaching it that two harpoons were struck at the same moment. The whale descended a few fathoms in the direction of another of the boats, which was advancing, rose beneath it, struck it with its head, and threw the boat, men and apparatus, fifteen feet into the air. The boat was inverted by the blow, and fell into the water keel uppermost. All the crew were picked up by the fourth boat, which was close at hand, excepting one man, who, being entangled in the boat, fell under it, and was consequently drowned. The whale was afterward killed.

CHAPTER V.

Account of the Discovery of Greenland.—Early History.—America discovered by Icelanders.—Greenlandic Colony in America.—First Appearance of the Esquimaux.—Black Death and Loss of Greenland.—Attempts at Rediscovery and Recolonization.—Greenland recolonized by Hans Egede.

To Icelanders belongs the honor of the discovery of Greenland. A certain Gunbiörn, being driven westward in a storm, was the first that saw its shores. This was soon after the colonization of Iceland. No attempt was, however, made to colonize Greenland at that time. But an Icelandic noble, by name Eric Raude or the Red, having killed another of his own rank, found it expedient to fly from the avengers of blood to some remote asylum. Accordingly, in 982, he repaired to Greenland, and first came in sight of land at Herjolf's Ness; then proceeding southwest along the coast, he wintered on what he called a pleasant island. Having spent three years in exploring the coast, he returned to Iceland, where he promulgated such a glowing description of the new land that great numbers of his countrymen followed him thither the ensuing spring. No less than twentyfive ships sailed in his company, of which only fourteen reached the place of their destination, the rest being either lost or driven back to Iceland. In the course of years, new swarms of colonists arrived from Iceland and Norway, and settled so thick on the east and west coast, that their number was computed to be

equal to the third part of the population of a Danish episcopal diocese.

Much discrepancy exists in the accounts of these settlements by the early historians of Iceland; but all agree that there were several establishments between Herjolf's Ness and Staten Hunk on the eastern shore. As many as nineteen are enumerated and described. Their account too of the climate and of the animal and vegetable kingdoms are totally at variance with the experience of the present day. The early history of the colonies is little more than a bulletin of broils and murders, many of them caused by the zeal of the first Christian converts, and by the fanaticism of the Pagans.

The Greenlanders became tributary to Denmark in A. D. 1023, which was soon after they embraced Christianity. They erected themselves into a bishopric, and there is a long list of their bishops on record. There is no evidence that such a thing as a military force ever existed among them, but there is sufficient proof that they had ships, and were well skilled in navigation; and it is incontestible that America was first discovered by them. To this effect we have the concurring testimony of Arngrim Jonas and Torfæus, corroborated by that of Adam Bremensis, who wrote about the time of the discovery. We opine that this curious piece of history should not be passed over in silence.

According to these authorities, Biorn, the son of Herjolf, on his way to Greenland from Norway, was driven by a storm to the southwest, where he discovered a flat, well-wooded country, and next to

an island. After this, he steered directly to Greenland.

When his discovery became known, Leif, the son of Eric Raude, emulous of his father's fame as a navigator and discoverer, fitted out a ship and sailed in company with Biorn. The first land they saw was stoney and barren, and they called it Flatland. Then they came to another shore, which they denominated Markland or Level land. Two days after, they came in sight of another coast, and sailed up a river the banks of which were covered with bushes bearing berries, and arrived at a small lake, of all of which a minute description is given. Here they spent the winter, and found that on the shortest day the sun rose at eight o'clock, which determines the latitude of their wintering ground to have been in 49° north, probably on the island of Newfoundland, or in the river St Lawrence.

They found grapes here, from which circumstance they called the country Wineland. In the spring, they returned to Greenland.

The next year, Thorwald, Lief's brother, returned. He fell in with a party of natives, who from the description of them must have been Esquimaux. In contempt of their small stature and miserable appearance, the Greenlanders killed them all, excepting one man, who made a timely escape. They bestowed upon these savages the contemptuous appellation of *Skrœlings*, or dwarfs.

They were in their turn attacked by the despised *Skrœlings*, and Thorwald their leader paid for his cruelty with his life. His people returned home

the next spring. A colony was settled in Wineland, and a trade was carried on between it and Greenland for more than a century. Civil dissensions finally destroyed it, and the colonists perished. He who doubts these statements, or wishes to learn the history in detail, may refer to the authors already given as authority.

The first Skrœlings or Esquimaux seen by the Scandenavian colonists were those slaughtered by Thorwald, and his crew in Wineland. Suddenly in the fourteenth century, they made their appearance in West Greenland, where they killed eighteen of the settlers, and then fled. This happened, according to Torfæus, in 1349. Since that time the Northern annals are silent respecting these savages, and all accounts of the history of Greenland draw to a close soon after.

About the year 1350, a horrible pestilence, called the Black Death, made terrible ravages among the colonists. It is said to have been so virulent as not only to destroy animal life, but to annihilate the whole vegetable kingdom of Greenland, leaving the land blasted and desolate. It began in the north of Europe, and thence extended to Iceland and Greenland. The wretched remnant of the colonists drew together on the eastern shore. By degrees their trade was neglected. In the fifteenth century all access to the coast was cut off by the before mentioned change in the position of the ice, and no more was ever known of them. There are some vague accounts of their having been seen at times from vessels that had succeeded in getting nigh the

coast; but it amounts to certainty, that by some means or other they perished, root and branch, and left none the slightest vestige of their existence behind.

In the reign of Queen Elizabeth, Martin Frobisher discovered Greenland, and penetrated the strait known by his name. His attempts were succeeded by those of John Davis, who discovered Davis' Straits, and actually landed in Greenland, at the mouth of Baal's River, and traded with the natives. Button, Hudson and Baffin, in seeking for a north-west passage, added much to the knowledge of arctic geography.

In 1605 Christian II. of Denmark, sent three ships to look for lost Greenland. They landed, took six savages prisoners, of whom they killed one, to awe the rest into submission, and returned to Denmark. The fate of the prisoners was melancholy. They pined for their native land, and at last escaping, put to sea in their canoes to return thither. Being driven back by a storm to the coast of Denmark, they were retaken, and three of them died of grief. Two of the survivors again attempted flight, but one of them was recovered. Two of them were kept in Denmark ten or eleven years, and employed in the pearl fishery at Coldingen. Here they were so rigorously tasked, even in winter, that one of them sunk under the load of life. The other once more fled, but was retaken more than an hundred miles from land, and died broken-hearted.

In 1606 three more vessels sailed to Greenland; but the natives were so exasperated at the treatment they had received, that they would allow the crew

no intercourse with the shore. Two more ships were despatched, which failed to reach the land on account of the ice, and Christian gave up the project of settling Greenland, in despair.

In 1636, a company of Copenhagen merchants fitted out two ships for Greenland. The crew landed on a beach of glittering yellow sand, with which they loaded their ships, imagining they had found a second Ophir. On their return to Copenhagen, it was examined, and proved to be wholly worthless, and the chancellor ordered it to be thrown into the sea. They had, however, what was of more value, in the horns of the narwhale, which they sold as the horns of the land unicorn, at six thousand rix dollars apiece.

During seven successive reigns, the Danes were assiduous to find and repossess the lost land of their ancestors. The accomplishment of this purpose was reserved for the pious zeal of Hans Egede, who addressed a memorial to Frederic IV., praying to be employed in the conversion of the Greenland savages. He was stimulated to this exertion by a belief that the descendants of the lost colonists, whom he supposed to be yet in existence, had sunk into Paganism for want of teachers. His petition was not granted, but postponed from year to year; but still he persevered, and resigned his pastoral office in Norway, and his means of subsistence, that he might be in readiness, whenever it should please the Lord to call him. Men very justly regarded him as an enthusiast, who had deserted his proper calling, in which he might have been really useful, and wan-

dered about like a knight errant, confiding in visionary revelations. However, by his indefatigable perseverance, after having sustained many repulses, he prevailed on some private persons to fit out an expedition with the double motive of fishing for whales and converting the Esquimaux. The king approved the project, and gave Mr Egede an annual salary of sixty pounds, and he sailed in May 1721. On the third of July, he landed at Baal's River, and from this day the recolonization of Greenland may be dated.

He found the Greenlanders distrustful of their new guests, and very unwilling that any permanent settlement should be formed. After a while he so far overcame the obstinacy of some of them, that they consented to receive baptism.

We have neither room nor inclination to pursue the history of a few small and miserable settlements farther. Of good fishermen and Greenlanders, Mr Egede made a good many bad Christians, and the Danish authorities keep them nominally such to this day.

CHAPTER VI.

Climate of Greenland.—Seasons and Weather.—Length of Days and Nights.—
Flora of Greenland.—Greenlandic Gardens.—General Remarks.—Voyage
of Captain Ross.

It will be readily believed, that in a country like Greenland, where the snow and ice are eternal, the cold must be severe. Yet it may be borne while the sun shines one or two hours daily. No general observations on the climate or weather of a land which comprises so many degrees of latitude will be strictly applicable to all its parts, and we shall therefore take Disko as our example, leaving the reader to draw his own inferences respecting the other districts of Greenland.

In the beginning of January, the ice and hoar frost at Disko extend down the chimneys to the stoves, and are not thawed by any fire that may be made during the day. All parts of the houses are covered with a thick coat of congelation. The breath of the sleeper freezes, and glues the bed-clothes to the bed. Meat must be hewed to pieces with an axe; and when put into boiling water, the outside is cooked before the inside is thawed. Ink, beer, and strong waters freeze, and burst the bottles. Spirits of wine, of the highest proof, acquire the consistency of frozen oil. However, this intense cold seldom lasts more than four or five days, without being interrupted by a thaw.

The strongest frost sets in about New Year's

day, and is in February and March so intense as to cleave large stones ; and vapor rises from the sea as from an oven. This is called the *frost smoke*. Those who venture out into it are aware of a darkness, but not of the piercing cold which is felt in a dry atmosphere, though their hair and clothes are stiffened with rime. The frost smoke is apt to raise blisters on the hair and skin, and when the air is sufficiently cold, congeals into minute pellicles, which are driven before the wind, and cause such a degree of cold on shore that it is impossible to stir out of doors without freezing. At such times the straits and bays are ice-locked, and the natives are in danger of starvation.

The summer begins in May and ends in September, and in the interval between them the Greenlanders live in tents. The earth, however, is not thawed before June, and even then to no great depth. Snow continues to fall during this month and recommences in August, though it does not lie till October. In the long summer days, in bays and vallies, where the sun's rays are concentrated, it is sometimes needful to pull off the warmer articles of dress. In the open sea the heat is sufficient to melt the pitch on the sides of vessels. Yet the evening breeze is so chilled by its passage over fields of ice, that a double covering is a barely sufficient protection from the cold. From April to August fogs prevail on the sea shore, and are frequently so dense, that the vision only reaches a few yards. The fine weather is most durable in autumn : even

then it never lasts long, and there is a constant alteration, of heat in the day and cold in the night.

The air of Greenland is pure, light, and favorable to the health of those who take proper care of it. The most common diseases of the country are scurvy, fistula, and oppression on the breast and eyelids, caused partly by oily diet, and in part by the cold and the glare of the snow.

Lasting rains are not frequent—especially at Disko, where the summer is usually dry. Hail is still more rare. The winds are variable, but in summer they usually blow from the shore, and are not so cold but they may be endured. Yet when storms do arise, which is most common in autumn, the houses crack and tremble, tents and boats are blown into the air, and the sea water is showered over the land in a drizzling rain. Whirlwinds sometimes occur in summer, which raise the waters to a great height, and boats are often lost in the eddies. The greater number and the most violent of these hurricanes blow from the south. If the moon be encircled by a halo, or if the evening sky be marked with various colors, it is considered a prognostic of an approaching storm.

Above the sixtysixth degree of north latitude, for some time before and after midsummer, the sun never sets. At Godhaab, in latitude 64°, it goes down about twenty minutes past ten, and rises again ten minutes before two, being below the horizon but two hours and forty minutes. In June and July it is so light during the night that the smallest print may be read with facility. In the same months the moun-

tain tops are constantly gilded by the sunbeams. During the period in which the sun does not set, he ceases to dazzle a few hours after noon, and presents the appearance of a full moon, on which the eye may gaze with impunity.

The winter nights are of a proportionate length. In Disko Bay, the sun does not rise from the thirtieth of January. The inhabitants then only enjoy a clear twilight, produced by the reflection of the sun's rays from the dense atmosphere, and from the adjacent mountains. Thus it is never so utterly dark in Greenland as in more southern countries. The light of the moon and stars is so strongly reflected from the snow and ice, that ordinary writing may be read at all times of the night; and when there is no moon, its absence is more than compensated by the brilliant coruscations of the Aurora Borealis. Parhelia and luminous haloes round the sun and moon are more frequently seen in Greenland than in warmer countries. Optical deceptions are of common occurrence, and have given subject to many a tale of wonder.

The Greenlandic Flora shows no fairer colors than might be expected in such a land. The vallies produce nothing but mosses and a miserable species of grass. A few herbs, bilberry bushes, and other shrubs vegetate on the desert isles, and on cliffs which have just soil enough to suffer them to take root. They seem to be the last sad memorials of a vegetation which is about to be succeeded by other sterility. The most common is *Cochlearia*, or scurvy grass, which is found in abundance wherever

blubber or any other manure has prepared a soil. A soup is made of it, which is the best medicine for the scurvy and many other diseases. The other plants are

Azalea, a creeper with beautiful red flowers.

Empetrum nigrum, the crow, or crakeberry, with juicy blackberries and flesh-colored flowers.

Andromeda, with violet, bell-shaped flowers.

Rubus chamæmorus, or cloud berry, which never comes to maturity.

Rumex digynus, mountain sorrel, found on ruined buildings.

Angelica archangelica, eaten by the inhabitants.

Polygonum viviparum, Alpine snakeweed. The root is eaten.

Ledum palustre, wild rosemary.

Thymos acinos, Basil thyme.

Rhodiola rosea, which is eaten.

Beside these there are mosses and lichens, some of which may be used for food. The juniper is abundant: there are also willows and birches of an abortive growth, which creep along the ground.

According to the Greenlanders, the southern part of the country produces wild service trees, and aspen poplars in abundance.

Some attempts have been made to cultivate oats and barley, but they never came to perfection, though they shot up as high a leaf here as in other countries.

The gardens cannot be very productive, as no seed can be sowed till the middle of June, and the frost recommences in September. Everything must

then be taken from the ground and laid by, except chives, which will endure the winter. Salad and cabbage will not bear transplanting, and remain very small. Radishes thrive as well here as in any other country. Turnips are seldom bigger than an egg. These are all that can be reared in gardens; nor will they even produce these, unless care be had to screen them from the north wind and the spray of the sea.

This then is the land that the early northern navigators described as a terrestrial paradise, and to which they gave the name of Greenland from its vegetation. Either the soil and climate must have undergone a total change, or they were but indifferent judges of arable lands. Barren and inhospitable as it is, the love of country abides even here. No people are more devotedly attached to their native land than the poor Uskees. Of this we have seen a notable instance in the conduct of those who were carried captives to Denmark.

Greenland is not without wherewith to interest the lovers of the marvellous and the romantic. Not to say any thing farther of ice and icebergs, of ships and shipwrecks, of whales and whale killers, it is written that in these waters many kinds of mollusca and barnacles exchange their calcareous covering for one of feathers, and, forsaking their permanent submarine abodes, fly in the air in the more dignified capacities of aquatic fowls. It would perhaps be matter of supererogation to say that the welking horns and continental bulk of the kraken are nowhere to be seen so often as in the Greenland

seas—or of words which freeze in the air of mid-winter, and make themselves heard unbidden at the first thaw. Here, in the coral groves, the mermaid coquets with the merman, or clears her green tresses on the rocks of the shore with her comb. Nay, she has so much of the female in her, that she sometimes bites at a baited hook, and becomes the prey of the fishermen, who tries her oil out, without regard to her sex. It is supposed that they have well endowed monasteries at the bottom of the sea ; for some of the masculine gender are found to wear cowls, and such are always the fattest. It is notorious, too, that one of the Sea Serpents has within a few years left the arctic waters, on a visit to Marblehead. These creatures are believed to be pugnacious in their propensities, to wear whiskers, and to glare from fiery red eyes, as big as pewter plates. Let all unbelievers consult Pontoppidan, who will give them a full account of these, and more marvels.

That part of Greenland which apparently extends westward from the northwestern extremity of Baffin's Bay will be best described by some account of the late voyages of discovery in that quarter, to which, indeed, we are indebted for the sum of our knowledge.

The first of these voyages was that of Captain Ross, of the British navy. This officer sailed from England with two ships, in 1818, to seek a passage to the Pacific Ocean round the northern coast of America. The results of his voyage were ; first, the discovery that Baffin's Bay really existed, a matter

held doubtful since the time of Baffin; second, by the determination of many points on the eastern shore of that bay; third, the discovery of Lancaster's Sound; and lastly, a series of interesting observations on the dip of the magnetic needle. A list of the names of the points at which he touched, would be in no wise interesting. Suffice it to say that the general appearance of the country north of the Danish settlements was mountainous, barren, and inhospitable.

At the place called by him the Arctic Highlands, he found a tribe, differing chiefly from the Greenlanders and other Esquimaux, in having no canoes, nor other means of floating except on pieces of ice, yet living by fishing and sealing. They had never seen white men before, nor had they any knowledge of their existence. In language, dress, manners, character, and personal appearance, they were like all other Esquimaux. As we propose to speak more at large on the subject of this race in another chapter, we forbear to give the fruits of the observations of Captain Ross, though they are well worthy of more attention.

Having added much to our knowledge of northern geography, Captain Ross returned to England,

CHAPTER VII.

Of the Uskees, or Aboriginal Inhabitants of Greenland.—Their physical Characteristics.—Dress.—Their Relations with other Tribes.—Progress in Religion and Civilization.—Intercourse with Europeans.—Knowledge in Trade.—Form of Society.

IN person, the Uskees are diminutive, but stoutly made. They are seldom above four feet four inches, except in the settled parts of Greenland, where the national figure is changed by intermarriage with the Danes. The native Uskees do not cordially associate with this mixed race, which they consider as degenerate. In complexion, they are generally of an olive brown. Their forehead and the sides of the head, above the temples, are greatly depressed; the crown is elevated considerably, and the back of the head is depressed, as well as the forehead. The smaller end of a hen's egg presents a familiar resemblance to their cranium. The eye is usually small, but piercing, not brilliant; and the calm, mild manner with which they contemplate a stranger, gives a good idea of the power of the eye. Their vision is astonishingly strong, by means of which they can distinguish objects at an incredible distance. The snow glare affects their eyes very much, which are often observed to be inflamed. Against this inconvenience, they have many ingenious contrivances, in the manner of eye-shades, which are usually a piece of wood made to fix across the eyes, having two fine slits, and a pin-hole in the centre of each to correspond to the

centre of vision. Their cheek bones are high, which, with their rounded flabby cheeks, renders the nose by no means a prominent feature. Their lips and mouth are generally large; the former very much protruded. The lower part of their face altogether forms a striking contrast to their narrow forehead, and is a chief distinguishing feature of this people. The women differ little from the men, except that they are not so tall. Their hands are remarkably fine, small, and neat. The same remark applies to their feet.

The dress of both sexes is nearly alike; the women being distinguished only by their jacket terminating in a triangular piece, before and behind, reaching to the knees. Nothing about the person of the Uskees is more remarkable than their hair. It hangs from their heads, long, black, coarse and lank, exactly like the hairy parts of whalebone. The women tie it in a bunch upon the top of the head, which takes away much of the unsightliness of such an object.

In the course of their wanderings, coming in contact with other tribes, who, from causes not necessary to form a part of this inquiry, had already spread over other parts of the American continent, and being of peaceful and very unwarlike habits, they were unfit to associate with their new neighbours. The consequence was, that the red Indians, as they are termed, who lived entirely by the chase, usually attributed to their timid neighbours every unfavorable change of weather that interfered with their hunting. Hence arose wars, which to the

present day are continued with undiminished asperity. The appearance too of the Uskee, clad in his skins, his head wrapped in a hood, and his whole figure lowly, and little expressive of warlike character, was remarkably contrasted with the tall, graceful figure of the red man, accustomed to warfare, and impatient of intrusion.

The Uskees, in self-defence, must have learned also how to fight, and doubtless retaliated with devastating effect, having always a sure retreat in their boats. This disposition the earlier settlers from Norway discovered to their cost, when they provoked them to vengeance in Greenland, and were in consequence extirpated.

The Danes, in re-establishing their claims to the possession of Greenland, have done very little towards ameliorating the condition of the natives. The natural disposition, however, of the Uskees, gypsy-like, makes them appear to conform to the manners and religion of their masters; yet little less doubt of their insincerity exists. It must be acknowledged that the conduct of many of the Danes sent thither, as it is said, for their crimes, is not well calculated to reconcile them to European sentiments. They are, if spoiled by such corrupt example, looked upon as untractable; and a sensible writer, descanting on their unwillingness to become converted, represents them as listening very attentively to christian exhortation; and when asked if they understood all that had been said to them, their answer was childishly affirmative, when it was evident they did not comprehend or retain a tittle of

the subject. They are such adepts in disguising or suppressing their passions, that one might take them for Stoics. They never interrupt any person while speaking; and their reply is sensible and brief, and marked with the most respectful deference to the person they address, provided he commands their good opinion.

The Danish convicts and settlers have intermarried with the Uskee women, and a mixed generation is now remarkably predominant where the government has been fixed. Some of the children of the Europeans by the Uskee women are quite fair, but all have that remarkable attachment to their country which the genuine natives evince.

In their intercourse with strangers, they are at first shy and cautious, but firm in their manners. That reserve soon disappears when they are kindly treated, and they freely communicate their knowledge of any thing asked them. Their experience extending but little beyond the arts befitting the necessary occupations of their own peculiar mode of life, makes their information of inconsiderable value when applied to the greater concerns of European commerce. They appear sensible of their deficiency in this respect, and when they reply to the inquiries of the whale hunters, it is always frankly, but diffidently. Any effort to extend their experience beyond the contracted circle of their wants, is attended with such a train of imaginary difficulties, that few, if any of them have ever ventured out of the footsteps of their forefathers. The Uskee jacket, trowsers, boots, darts and canoe (for they use this

name for a boat indiscriminately with *kaiak*) are identically the same as they were observed more than eight hundred years ago.

There is not, probably, a nation upon earth more remarkable for urbanity, than the inhabitants of Greenland. Few common minds, on witnessing the splendor of a London assembly, its luxuries, elegance and grandeur, and, were it possible, turning the eye the next instant on the little patriarchal circle in an Uskee hut, would relish the comparison; yet to any one accustomed to reflect, and to appreciate the happiness of mankind comparatively, on the scale of necessary wants and wishes, the lot of the apparently wretched Greenlander is far from being miserable. In truth, had European luxury and its allurements been withheld, he would have still remained in aboriginal simplicity and happiness; and, if any thought now arises to disturb his constitutional tranquillity of mind, it proceeds from a reflection that he wants something from the great *oomiak*; (it is by this term the Uskee expresses a ship;) and he will readily barter the last article of dress, necessary to the comfort of his person, in order to obtain a bit of lead, or some powder for his gun, or a rag of handkerchief for his *cuna*.

The articles generally trafficked with them are such as the sailors find no longer useful to their own accommodation, or some coarse article of dress, of no value when compared with what they get in exchange. In later years, the arts of the European have taught them a little more cunning, and some are as expert now at making a bargain as

any of their visitors. Strictly honest in all their dealings, they are exceedingly watchful that they be not cheated; and he must indeed be worse than savage who would wrong people of such exemplary integrity as theirs. The hardships and perils through which they must toil in order to procure material articles for barter, should also induce a humane consideration of their condition, and protect them from injustice. Some serious grounds, therefore, of dislike towards the Danish sovereignty must exist, before these people, strongly guided by a sense of right and wrong, could be brought to express an abhorrence of their master's principles; and this must be either by the Danes exacting from their industry a demand in the shape of tax for the protection afforded them, or for the support of the missionaries, or else by trucking with them on terms obviously disadvantageous to the natives. On either point, the Uskee feels his superiority in principle over his master, and is not to be reconciled to his views.

The original form of society still exists among the Uskees in all its simplicity. Though a nation as distinctly defined as any other in the world, yet they are such only in identity of character. Their institutions are truly patriarchal, without the danger of dissolution from the extravagant acquisition of property. While in the early government of patriarchal form, the gradual accession of landed property and flocks of cattle and servants, led to the despotism of some wealthier lord; and many, shar-

ing such abundance in common, desired a chief who should maintain equal justice,—these petty governments became gradually absorbed into larger ones, and empires have been formed, and revolutions have given rise to ruinous and wasting wars. In the absence of such mutations, the simple Uskee, content in his kaiak, plies his paddle in unmolested waters, kills his seals and wild birds, or transfixes his nimble game, and in the bosom of his small rejoicing family enjoys his good fortune, and trains his son to imitate the prowess and skill of his sire. Living in a manner that requires little from the neighbouring soil, he farms not, he tills not, nor concerns himself in the slightest degree about the right of property in the territory in which he resides: he is consequently free from the broils which such species of property is likely to create. Give him his fishing waters, and leave him undisturbed, ‘he takes no thought for the morrow!’

The father of a family is to all intents, absolute chief; but still his authority is exercised with the mildest sway. To chide for a fault is considered the severest punishment. Blows are never resorted to. It is considered a savage and barbarous act to strike an Uskee, and is looked on with abhorrence. The women are treated kindly, but are regarded as servants, doing all the labors of the house, except such parts as the men think their superior understanding only can be equal to. Domestic harmony is seldom known to be disturbed, unless when, in the absence of the men, some dowager

mother exercises her peevishness upon her daughter-in-law, especially if the latter have not the good fortune to have been the mother of a son; for on the birth of male children they think the existence of their nation rests.

CHAPTER VIII.

Occupations of the Uskees.—Use made of the Whale.—Manner of spending the Winter.—Manner of spending the Summer.—Manner of catching Seals.—Enjoyments of the Uskees.—Language.

It would be strange indeed, if the Uskees were not a contented people, so few are their wants. The men are the carpenters, the women are the tailors, shoemakers, house-masons, and cooks, the last more particularly, as the men, on returning with game, are no sooner disengaged from their kaiaks than all concern on their part ceases. This arises very probably from the excessive fatigue to which they are exposed, rather than to any indifference towards their women. The women's labor then commences. They have to haul the seals ashore, and convey to the tent or hut the different animals taken. Their first concern is to draw a little blood from the seal, (which, after being killed, is stanced for that purpose) and present it to the men, by way of cordial after their fatigue. Then, having provided the men with dry clothes, they proceed to

flay and cut up the spoil. Seal's flesh forms their chief support; and they employ various modes of preserving it for future use. The most common is to cut it into thin slips, and so dry it over a line in the interior of their hut. The blubber is most carefully preserved, as being convertible to almost every domestic comfort, more precious by far to them, than wine is to others. Oil is the luxury of their meals, their bread being nothing more than the dried muscular part of the seals or of birds.

Such a representation of life would form little inducement to an European to exchange his comforts for it. The picture is to refined appetites truly disgusting; and the horrible smell of their huts, persons, and almost every article belonging to them is intolerable to the coarsest. Even the sailor, accustomed to the atmosphere of a whale-ship, has been frequently known to nauseate the inside of a Greenlander's hut. These poor creatures smile at such squeamishness, and kindly excuse the want of politeness in the stranger, as he could not possibly know any thing better.

The whale, wounded, and carrying in his huge body the instrument of destruction, very often in his anguish runs himself ashore, or into some creek among the rocks, and there lingering dies. Such a chance is an unexpected blessing, if discovered; and any person who has ever winded a dead whale must know that an occurrence of that kind is not likely to remain long a secret. Every hut is then emptied to take advantage of the fortunate

occasion. If any one is within reach of the good tidings, he is immediately invited, and it is easy to imagine what a scene ensues. Men, women, and children, with every edged instrument at command, are in full employment. But in such eagerness, wounds are often inflicted by accident, and such are never resented. The blubber is carefully stored, that it may subside into oil; the muscular parts are removed for future provision, and nothing can be of coarser texture, yet still they relish it, and are thankful for the blessing. The tendons are also carefully preserved, to be appropriated as cordage, thread, lines, and for various other purposes; and in the whalebone they have sufficient for their own private necessities, and for the demands of the Danes.

In winter time they retire further from the sea than they have been in the summer months, and in their huts or winter houses generally spend the interval between the latter end of October and the middle of March in preparing their fishing tackle, while the women are busily engaged in repairing the kaiak, or sewing dresses for the men. On such occasions the children have an opportunity of learning the arts peculiar to their sex, and scarcely any other time is given for their education.

As soon as the returning sun announces the approach of summer, all is bustle and activity. The materials for the summer huts are got in readiness, and the whole household, consisting sometimes of

five or six families, moves downwards to the fishing place, which is generally a low island with a sloping beach looking towards the south, for the ease and convenience of launching the boats or drawing the seals ashore. They are not confined to any particular spot for the summer. Unless abundance of seals be seen, they generally shift to some other station, which in the course of former seasons they have observed as more fit, or as they may have information from others of their countrymen.

The Greenlander is very vain of his accomplishments; and viewing them, as he does, as the perfection of human art, he pities the ignorance of any one who is unable to manage a kaiak, or use the hand-board in discharging the spear or lighter dart. It is dangerous for an European to venture into one of these canoes, as he is almost certain of being instantly upset; in which case the buoyancy of the little bark would certainly keep him immersed, and drown him.

The seal, mischievous in the extreme towards every creature weaker than himself, entertains a sovereign dread of the Uskees, and flies from every quarter where he discovers a kaiak; but his precaution seldom avails. The instant a seal is seen by a Greenlander, he whispers 'Pussee!' (seal) along the surface of the water to the nearest of his companions, who telegraphs the signal until all the boats are engaged in the chase, and it is seldom possible for their prey to escape. The seal is impetuous in disposition, and, having once observed his

pursuers, he dives repeatedly, and in different directions, to confound them; but becomes at length so short-breathed by his hurry, that he cannot remain long out of sight; and as the Uskees are around at various points watching the favorable moment, one of them paddles silently in his rear, using the paddle with one hand, while with the other he is getting his tackle in order; and having advanced near enough, for he is sure to measure the distance with accuracy, he flings the dart, and never fails to strike. The seal, terrified and wounded, dives in the greatest terror; but a float being attached to the dart by a leathern line, he is soon forced up again, and despatched. They are then careful to stanch the wounds, to save as much as possible, and to distend the body, by blowing into the cellular part, as butchers sometimes are used to do, in order to make the body of the animal buoyant; otherwise it would go to the bottom as soon as dead.

Seal hunting, being their most profitable as well as most dangerous pursuit, is looked upon as the perfection of manly achievement. It is the sum of praise to which every man aspires; and it is chiefly through the fame of having killed such a number of seals that any can aim at preeminence. The unmarried women listen with eagerness when such great exploits are recounted; and a description of a seal hunt given, with proper emphasis and gesture, by the fortunate hunter, is sure to obtain general approbation. The applause which they

bestow is not however clamorous, but tinctured with that decency and reserve for which they are remarkable. It is on such occasions that love-matches are usually set on foot; and the successful candidate for the lady's hand must rely on the credit he has obtained by the number of seals he has taken.

There is very great danger to the Greenlander in the seal hunt. Should the seal be little exhausted in the chase, he often turns on his adversary, seizes on his kaiak, and with his sharp teeth pierces the flimsy cover, when no alternative remains to the poor Uskee but death, as his kaiak will sink, and take him down. This must be certain; as the others can offer no assistance, except to allow him to hold by the end of another boat, to the great risk of him who navigates it. Except in the case of father and son, such accommodation is very rare, as every man on such emergency naturally thinks of the value of his life to his own family. Much danger is also to be apprehended if the line get foul of the paddle, or arm, or even neck of the hunter, when the seal dives so suddenly on being wounded. It is then that the Uskee displays his skill and expertness. If upset, he raises himself again in his kaiak, by a dexterous management of his paddle.

When assembled at a merry-making or at a marriage-feast, they are cheerful and joyous in the highest degree; but none of that boisterous rejoicing, which is considered the test of enjoyment in

other places, is here known. The dance is practised in lively and tolerably well executed movements; and some of the Danes having introduced the fiddle among them, they contrive to make out a pleasing entertainment. The men talk over their exploits in seal hunting, and the boys are always attentive and silent hearers. Sometimes the song is raised, when one who leads the chorus repeats a line, and this is immediately succeeded by all the rest joining in a short accompaniment of no particular meaning.

They are extremely hospitable, particularly to any of their own nation who happen to pass near their abode, in removing from one place to another in quest of seals. A brotherly invitation is instantly given, and the utmost attention is paid to the stranger, who freely imparts his experience of the season, and receives in return such information as he requires. It is this interchange of good offices which makes them set so high a value on each other.

The language of the Greenlanders or Uskees is very general. Like the Norwegians, they pronounce the letter R in their throat, so that it is not easy to distinguish many of their tones. They pronounce their words with great fluency; and their accents seem to be numerous, by the peculiar stress with which they deliver certain sounds. There are many consonants which they never use at the beginning of words, as they prefer commencing generally with a vowel. Even such words of other languages as they are desired to repeat, they dress

in their own sounds; and if it begin with any of the proscribed letters, such is usually omitted, as was observed in the term Skraelling, which they converted into Karalit. They have no writing; though some of the children of the Danish convicts have been taught to write. The Uskees think it so much time thrown away from the more important concern of learning the management of the kaiak and dart. They usually reckon on their fingers, and seldom go beyond ten in counting; though others say they have been known to reckon as high as twenty. Their conveniences of life being so few, makes further numbering unnecessary.

CAPTAIN PARRY'S FIRST VOYAGE OF DISCOVERY.

CHAPTER I.

Object of Parry's First Voyage.—Equipment of the Expedition.—Passage up Davis' Straits.—Embarrassment in the Ice.

As that part of Greenland or America, lying immediately west and northwest of Baffin's Bay, is only known by the late discoveries of Captain Parry, a continuous account of his voyages will, probably, be the best method of describing it that we can adopt.

Lieutenant Parry* was appointed to the command of his Majesty's ship *Hecla*, a bomb of 375 tons, on the 16th of January, 1819; and the *Griper*, gun brig, 180 tons, commissioned by Lieut. Matthew Liddon, was at the same time directed to put herself under his orders. The object of the expedition was to attempt the discovery of a North-West Passage into the Pacific. On board Capt. Parry's ship was an astronomer, Capt. Edw. Sa-

* Then a Lieutenant; for convenience we shall call him Captain.

bine, R. A. and a competent number of officers, a Greenland master, and a Greenland mate. Every individual engaged in the expedition was to receive double the ordinary pay of his Majesty's navy. The vessels were rigged after the manner of a barque, as being the most convenient among the ice, and requiring the smallest number of men to work them. They were furnished with provisions and stores for two years; in addition to which, there was a large supply of fresh meats and soups preserved in tin cases, essence of malt and hops, essence of spruce, and other extra stores, adapted to cold climates and a long voyage. The ships were ballasted entirely with coals; an abundance of warm clothing was allowed, a wolf-skin blanket being supplied to each officer and man, besides a housing-cloth, similar to that with which wagons are usually covered, to make a sort of tent on board. Various kinds of presents were furnished to secure the friendship of the natives, and a number of valuable, astronomical and philosophical instruments were put on board each ship.

Capt. Parry had served in the former expedition under Capt. Ross, and was advantageously known to the Board of Admiralty for his skill in his profession and his peculiar qualifications for such service. He was to pass, if possible, through Lancaster's Sound to Behring's Strait. In case of success, he was to proceed to Kamtschatka, and thence to forward an official account of his voyage to England, through Siberia. Thence the *Hecla* and *Griper* were to return to England round Cape Horn.

Other specific instructions were given, but much was left to his discretion. He was expected to co-operate with Captain Franklin, who was at the same time sent to the mouth of Coppermine River, in effecting the purpose of his voyage.

Captain Parry sailed from England in the beginning of May, and on the fifteenth of June he came in sight of Cape Farewell. He proceeded up the Strait of Davis, and for three days found the ice close *packed*. Passing through ice fields and among icebergs, he approached the western shore. On the twentyfifth, the ice closed round the ships and arrested their progress. As far as the eye might reach from the mast-head, nothing could be seen to the westward but one unbroken mass of ice.

It is usual for whales to descend head foremost, displaying their enormous tails in the air; but here the ice was too close to permit the first one seen on the voyage to perform this feat, and he went down tail first, to the great amusement of the Greenland sailors.

As long as the wind continued to blow strong towards the ice, so as to keep it close, the ships lay securely sheltered from the sea; but at nine in the evening, when it veered a little to the westward, the ice became more slack, and they began to feel the effects of the swell which was thus admitted from without: each roll of the sea forced the heavy masses of ice against the rudder and counter with such violence as would have greatly endangered a ship built in the ordinary way: strengthened as these were, however, they escaped without damage.

Frequent endeavours were made to heave the heads of the ships round, in order that they might receive the heaviest pressure on their bows, but every attempt proved unsuccessful, and they remained in the same unpleasant situation during the whole of the 28th.

While in this state, a large white bear came near the Griper, and was killed by her people, but he sunk between the pieces of ice. This animal had, probably, been attracted by the smell of some red herrings which the men were frying at the time. It is a common practice with the Greenland sailors to take advantage of the strong sense of smelling which these creatures possess, by enticing them near the ships in this manner.

The swell had somewhat subsided on the 29th, but the ships remained firmly fixed in the ice as before. In the course of the day they saw land bearing N. 69° W. about thirteen leagues distant, appearing from the mast-head like a group of islands, and situated near to the entrance of Cumberland Strait; the soundings were one hundred and thirty-five fathoms; the temperature of the sea at that depth 30° ; that of the surface being the same; and of the air 34° . On the 30th, the ice began to slacken a little more about the ships; and, after two hours' heaving with a hawser brought on each bow to the capstan and windlass, they succeeded in moving the Hecla about her own length to the eastward, where alone any clear sea was visible. The ice continuing to open still more in the course of the day, they were at length enabled to get both

ships into open water, after eight hours' incessant labor.

Their first attempt to approach the western coast having thus failed, Capt. Parry consulted the Greenland Masters, as to what were the most likely means to be adopted for effecting this object. Mr Allison thought it would be advisable to run a degree or two back again to the southward; while Mr Fife was of opinion, that it might be attempted, with a better chance of success, about the latitude of Mount Raleigh, which forms one side of the narrowest part of Davis' Strait. Capt. Parry determined on the latter.

They kept close to the edge of the pack on the 1st and 2nd of July, without finding any opening in it. On the third they crossed the Arctic circle.

Towards midnight, the wind having shifted to the southwest, and moderated, another extensive chain of very large icebergs appeared to the northward: as they approached them, the wind died away, and the ships' heads were kept to the northward, only by the steerage way given to them by a heavy southerly swell, which, dashing the loose ice with tremendous force against the bergs, sometimes raised a white spray over the latter to the height of more than a hundred feet, and being accompanied with a loud noise, exactly resembling the roar of distant thunder, presented a scene at once sublime and terrific. They could find no bottom near these icebergs with one hundred and ten fathoms of line.

At four, A. M. on the 4th, they came to a quanti-

ty of loose ice, which lay straggling among the bergs; and as there was a light breeze from the southward, and they were anxious to avoid, if possible, the necessity of going to the eastward, they pushed the Hecla into the ice, in the hope of being able to make way through it. They had scarcely done so, however, before it fell calm; when the ship became perfectly unmanageable, and was for some time at the mercy of the swell, which drifted her fast towards the bergs. All the boats were immediately sent a-head to tow; and the Griper's signal was made, not to enter the ice. After two hours hard pulling, they succeeded in getting the Hecla back again into clear water, and to a sufficient distance from the icebergs, which it is very dangerous to approach when there is a swell. At noon they were in lat. $66^{\circ} 50' 47''$, long. $57^{\circ} 07' 56''$, being near the middle of the narrowest part of Davis' Strait, which is here not more than fifty leagues across.

On the 5th, it was necessary to pass through some heavy streams of ice, in order to avoid the loss of time by going round to the eastward. On this, as on many other occasions, the advantage possessed by a ship of considerable weight in the water, in separating the heavy masses of ice, was very apparent. In some of the streams, through which the Hecla passed, a vessel of a hundred tons less burthen must have been immoveably beset. The Griper was on this, and many other occasions, only enabled to follow the Hecla by taking advantage of the openings made by the latter.

A herd of walrusses being seen lying on a piece of ice, a boat succeeded in killing one of them. These animals usually lie huddled together, like pigs, one over the other, and are so stupidly tame, as to allow a boat to approach them, within a few yards, without moving. When, at length, they are disturbed, they dash into the water in great confusion. It may be worth remarking, as a proof how tenacious the walrus sometimes is of life, that the animal killed struggled violently for ten minutes after it was struck, and towed the boat twenty or thirty yards, after which the iron of the harpoon broke; and yet it was found, on examination, that the iron barb had penetrated both auricles of the heart. A quantity of the blubber was put into casks, as a winter's supply of lamp-oil.

The ice was so compact that it was impossible to penetrate to the westward, and nothing remained to be done, but to make the best way they could, by beating to the northward along the edge of the pack, until on the 10th a thick fog came on, which made great caution necessary in sailing, there being a great many icebergs near. There is, however, even in the thickest fog, a strong reflection of light from these immense bodies of ice, which, with an attentive look-out, is generally visible at a sufficient distance to enable the navigator, if in smooth water, to avoid coming in contact with them.

A large bear being seen on a piece of ice, near which they were passing, a boat was despatched in pursuit, and the people succeeded in killing and towing it on board. As these animals sink imme-

diately on being mortally wounded, some dexterity is requisite to secure them, by first throwing a rope over the neck, at which many of the Greenland seamen are remarkably expert. It is customary for the boats of the whalers to have two or three lines coiled in them, which not only gives them great stability, but, with good management, makes it difficult for a bear, when swimming, to put his paw upon the gunwale, which they generally endeavor to do. A boarding-pike is the most useful weapon for this purpose. The lance used by the whalers will not easily penetrate the skin, and a musket ball, except when very close, is scarcely more efficacious.

The facility with which a vessel may sail through Davis' Strait seems to depend much upon the season at which the attempt is made. For the first fortnight in June, it is seldom practicable to get beyond latitude 70°. Towards the end of the month ships may usually penetrate to the seventyfourth degree. From that time to the end of August the obstruction decreases daily, and it is probable that a vessel entering the strait on the first of July may reach a high latitude without any detention.

After being again beset, and finding a variety of difficulties from the tenacity of the ice, on the 21st Capt. Parry reached latitude 73°. Unwilling to increase the distance from Lancaster's Sound by proceeding farther north, he determined to enter the ice here. Accordingly he ran in among the floes, heaving the ships through with hawsers, and taking every advantage of the wind, which was light. On

the evening of the 22d the ships were totally beset, and no open water could be seen from the mast head. On the 23d a thick fog came on, and they made fast to an iceberg.

The weather being clear in the morning of the 25th, and a few narrow lanes of water appearing to the westward, the Griper was made fast astern of the Hecla; and her crew being sent to assist in manning the Hecla's capstan, they proceeded to warp the ships through the ice. This method, which is often adopted by whalers, has the obvious advantage of applying the whole united force in separating the masses of ice which lie in the way of the first ship, allowing the second, or even the third, to follow close astern, with very little obstruction. In this manner they advanced about four miles to the westward, by eight, P. M., after eleven hours of very laborious exertion; and having then come to the end of the clear water, and the weather being again foggy, the ships were secured in a deep 'bight,' or bay in a floe, called by the sailors 'natural dock.'

Early on the morning of the 26th, there was clear water as far as they could see to the westward, which, on account of the fog, did not exceed the distance of three hundred yards. They made sail, however, and having groped their way for about half a mile, found the ice once more close in every direction, except that in which they had been sailing, obliging them to make the ship fast to a floe. A boat was sent to endeavour to find a lane of clear water leading to the westward. She returned on

board in an hour, without success, having with difficulty found her way to the ship, by the muskets, and other signals.

At half-past three, P. M., the weather cleared up, and a few narrow lanes of water being seen to the westward, every exertion was immediately made to get into them. On beginning to heave, however, they found that the 'hole' of water in which the *Hecla* lay, was now so completely enclosed by ice, that no passage out of it could be found. They tried every corner, but to no purpose; all the power they could apply being insufficient to move the heavy masses of ice which had fixed themselves firmly between them and the lanes of water without. In the mean time, Lieutenant Liddon had succeeded in advancing about three hundred yards, and had placed the *Griper's* bow between two heavy floes, which it was necessary to separate before any further progress could be made. Both ships continued to heave at their hawsers occasionally, as the ice appeared to slacken a little, by which means they were now and then drawn ahead a few inches at a time, but did not advance more than half a dozen yards in the course of the night. By nearing several bergs to the northward, the ice appeared to be drifting in that direction, the wind being moderate from the southward.

CHAPTER II.

Farther Detention in the Ice.—Whales.—Arrival at Lancaster's Sound.—
Land about Possession Bay.—New Lands discovered.—The Vessels are
again stopped by the Ice.

ABOUT three, A. M., Tuesday, 27th, by a sudden motion of the ice, they succeeded in getting the *Hecla* out of her confined situation, and ran her up astern of the *Griper*. The clear water had made so much to the westward, that a narrow neck of ice was all that was now interposed between the ships and a large open space in that quarter. Both ships' companies were, therefore, ordered upon the ice to saw off the neck, when the floes suddenly opened, sufficiently to allow the *Griper* to push through, under all sail. No time was lost in the attempt to get the *Hecla* through after her; but, by one of those accidents to which this navigation is liable, and which renders it so precarious and uncertain, a piece of loose ice, which lay between the two ships, was drawn after the *Griper* by the eddy produced by her motion, and completely blocked the narrow passage through which the *Hecla* was about to follow. Before they could remove this obstruction by hauling it back out of the channel, the floes were again pressed together, wedging it firmly and immoveably betwixt them; the saws were immediately set to work, and used with great effect, but it was not till eleven o'clock that they succeed-

ed, after seven hours' labor, in getting the Hecla into the lanes of clear water which opened more and more to the westward. The latitude by account at noon, was $73^{\circ} 05' 56''$, the longitude $60^{\circ} 22' 27''$.

On the 29th they had so much clear water, that the ships had a very perceptible pitching motion, which, from the closeness of the ice, does not very often occur in the polar regions, and which is therefore hailed with pleasure, as an indication of an open sea. At five, P. M. the swell increased considerably, and as the wind freshened up from the northeast, the ice gradually disappeared; so that by six o'clock they were sailing in an open sea, perfectly free from obstruction of any kind.

They now seemed all at once to have got into the head-quarters of the whales. They were so numerous that no less than eightytwo are mentioned in this day's log. Mr Allison, the Greenland master, considered them generally as large ones, and remarked, that a fleet of whalers might easily have obtained a cargo here in a few days. It is a common idea among Greenland fishermen, that the presence of ice is necessary to ensure the finding of whales; but there was no ice in sight this day, when they were most numerous. In the afternoon the wind broke the Hecla off from the N. N. W. which obliged her to cast off the Griper, and she carried all sail ahead to make the land. It was seen at half past five, P. M., being the high land about Possession Bay, and at the same time several streams of loose but heavy ice came in sight, which a fresh

breeze was drifting fast to the southeastward. Lancaster's Sound was now open to the westward, and the experience of a former voyage had given Capt. Parry reason to believe that the two best months in the year for the navigation of these seas were yet to come. This consideration, together with the magnificent view of the lofty Byam Martin Mountains, which forcibly recalled to his mind the events of the preceding year, animated him with expectation and hope. If any proof were wanting of the value of local knowledge in the navigation of the Polar Seas, it would be amply furnished by the fact of his having now reached the entrance of Sir James Lancaster's Sound just one month earlier than he had done in 1818, although he had then sailed above a fortnight sooner, with the same general object in view, namely, to penetrate to the western coast of Baffin's Bay, where alone the Northwest Passage was to be sought for.

On the 31st, they anchored in Possession Bay, and discovered a flag-staff which had been erected on the former expedition.

The land immediately at the back of Possession Bay rises in a gentle slope from the sea, presenting an open and extensive space of low ground, flanked by hills to the north and south. In this valley, and even on the hills, to the height of six or seven hundred feet above the sea, there was scarcely any snow, but the mountains at the back were completely covered with it. The bed of the stream, which winds along the valley, is in many places several hundred yards wide, and in some parts from thirty

to forty feet deep; but the quantity of water which it contained at this season was extremely small in proportion to the width between the banks, not exceeding forty feet on an average, and from one to three feet only in depth near the mouth of the stream. This feature is common to every part of the polar regions; the beds, or ravines, being probably formed by the annual dissolution of the snow during a long series of years. Traces of Esquimaux were found on the river, as well as the foot-prints left by the former expedition.

The only animals met with were a fox, a raven, some ring-plovers, snow-buntings, and a wild bee. Several tracks of bears and of a cloven-footed animal, probably the reindeer, were also observed upon the moist ground. Three black whales were seen in the bay, and the crown-bones of several others were lying near the beach. Considerable tufts of moss and of grass occur in this valley, principally in those parts which are calculated to retain the water produced by the melting of the snow. Indeed, moisture alone seems necessary to the growth of a variety of plants which are found in this dreary climate. Mr Fisher, who had an opportunity of examining some of the fixed rocks, pronounced them to consist principally of basalt.

The tide here rose about eight feet, and the flood seemed to come from the northwest.

On the first of August, it having been found that the Griper could not keep up with the Hecla, Captain Parry determined to leave her. He appointed the middle of Lancaster's Sound as a place of ren-

deztvous, and then crowded all sail on the Hecla. In the evening he came in sight of the northern shore of the sound, and the next day had a clear view of both sides of it. On the southern side were high, peaked mountains, covered with snow, excepting at the base, but on the northern, the land was not so rugged, or so high, and there was much less snow. The sea was open before them.

Running up the sound as far as Cape Castlereagh, more distant land was seen to the westward; and between this land and Cape Castlereagh was an inlet, to which Capt. Parry gave the name of Navy Board Inlet. Points of land were seen all round this inlet, and the belief is, that it is not continuous. In the meanwhile the land opened on the northern shore, consisting of high mountains, and in some parts of table land. Several headlands were distinctly visible, and names were given to them. One inlet, through which Capt. Parry was of opinion that a passage might be found into the Polar Sea, received the appellation of Croker's Bay.

Having run due west nearly out of sight of the Griper, the Hecla hove to for her to come up, in longitude $83^{\circ} 12'$ west from Greenwich where the two shores of the sound were yet twenty-nine miles apart, and without the slightest appearance of land to the westward. The only ice met consisted of a few large bergs, very much worn by the washing of the sea. Whales were seen, and the wind so increased that the top gallant yards were taken in.

On the fourth, the Griper being within a few

miles of the Hecla, Lieut. Beechy discovered, from the crow's nest, breakers to the northward. The Hecla was instantly rounded to, for the purpose of sounding; but no bottom was found with fifty fathoms of line. The Griper coming up shortly after, found bottom with fortyfive fathoms. The vessels then bore away to the westward. The cliffs on this part of the coast had a singular appearance, being horizontally stratified, and having a number of regular projecting masses of rock, broad at the bottom, and pointed at the top, resembling buttresses raised by art at equal intervals.

The sea was here as clear of ice as in any part of the Atlantic, and they began to flatter themselves that they had indeed entered the Polar Sea, and the most sanguine began to calculate the distance to Icy Cape, while their conjectures were in some degree confirmed by the oceanic color of the water, and a long swell rolling in from the south and east. Their vexation was, therefore, extreme, when toward evening land was seen ahead. It proved, however, to be a small island. More land was discovered to the westward, and at eight, P. M. they came to a stream of ice extending several miles in a direction parallel to their course. As clear water could be seen over it to the south, they hoped it would prove no obstruction. In this they were disappointed; after sailing for two hours along the edge of the ice, they perceived that it proceeded from a compact and impenetrable body of floes which cut off their passage. A considera-

ble surf was rolling on the edge of the pack, and the ships with some difficulty escaped being embayed. A second island was discovered south of the former, and Capt. Parry gave the name of Prince Leopold's Isles to the two. The weather was calm and foggy, and while it remained so, a number of the officers and men amused themselves in the boats, in endeavouring to kill some of the white whales which were swimming about the ships in great numbers; but the animals were so wary, that they would scarcely suffer the boats to approach them within thirty or forty yards, without diving. Mr Fisher described them to be generally from eighteen to twenty feet in length; and he stated, that he had several times heard them emit a shrill, ringing sound, not unlike that of musical glasses when badly played. This sound, he further observed, was most distinctly heard, when they happened to swim directly beneath the boat, even when they were several feet under water, and ceased altogether on their coming to the surface. They saw also, for the first time, one or two shoals of narwhales, called by the sailors, sea-unicorns.

A breeze springing up, the ships stood to the northward, and it was ascertained, to the dissatisfaction of all on board, that the sound or strait was closed, excepting in one place to the southward, and to this opening they directed their course. In a few hours it became calm again; and the Griper having unfortunately sprung both her topmasts, Lieut. Liddon took advantage of the calm weather

to shift them. The Hecla's boats were at the same time employed in bringing on board ice, to be used as water; a measure to which it is occasionally necessary to resort in these regions, when no pools or ponds are to be found upon the floes. In this case, berg-ice, when at hand, is generally preferred; but that of floes, which is in fact the ice of sea-water, is also abundantly used for this purpose: the only precaution which is necessary to observe, being that of allowing the salt-water to drain off before it is dissolved for use. One of the boats was upset, by the fall of a mass of ice which the men were breaking; but fortunately no injury was sustained.

CHAPTER III.

Cape Seppings discovered.—Near Approach to the Magnetic Pole.—Unfavorable Position of the Ice.—Appearance of Prince Regent's Inlet.—Port Bowen.

A BREEZE sprung up from the N.N.W. in the evening, and the Griper being ready to make sail, they stood to the southward. The land, which now became visible to the southeast, discovered that they were entering a large inlet, not less than ten leagues wide at its mouth, and in the centre of which no land could be distinguished. The western shore of the inlet, which extended as far as they could see to the S.S.W., was so encumbered with ice, that there was no possibility of sailing near it. They,

therefore, ran along the edge of the ice, between which and the eastern shore there was a broad and open channel, with the intention of seeking, in a lower latitude, a clearer passage to the westward than that which they had just been obliged to abandon. The head land which forms the western point of the entrance into this inlet, they called Cape Clarence, and another to the southeast of it, was named Cape Seppings.

Since the time they first entered Lancaster's Sound, the sluggishness of the compasses, as well as the amount of their irregularity produced by the attraction of the ship's iron, had been found very rapidly, though uniformly, to increase, as they proceeded to the westward; so much, indeed, that, for the last two days, they had been under the necessity of giving up altogether the usual observations for determining the variation of the needle on board the ships. This irregularity became more and more obvious, as they now advanced to the southward, which rendered it not improbable that they were now making a very near approach to the magnetic pole. For the purposes of navigation, therefore, the compasses were from this time no longer consulted; and in a few days afterwards, the binnacles were removed, as useless lumber, from the deck to the carpenter's store-room, where they remained during the rest of the season.

Being desirous of obtaining all the magnetic observations they were able, on a spot which appeared to be replete with interest in this department of science, and the outer margin of the ice consisting

entirely of small loose pieces, which were not sufficiently steady for using the dipping-needle, they hauled up for the nearest part of the eastern shore, for the purpose of landing there with the instruments. They got in with it about noon, having very regularly decreased the soundings from forty to fifteen and a half fathoms; in which depth, having tacked, at the distance of two miles and a half from the shore, two boats were despatched from each ship, under the command of Lieuts. Beechy and Hoppner, who, together with Captain Sabine, were directed to make the necessary observations, and to collect whatever specimens of natural history the place might afford. They landed on a beach of sand and stones, having passed, at the distance of one mile from it, several large masses of ice aground in six to eight fathoms water, which shoaled from thence gradually in to the shore. The officers describe this spot as more barren and dreary than any on which they had yet landed in the arctic regions; there being scarcely any appearance of vegetation, except here and there a small tuft of stunted grass, and one or two species of saxifrage and poppy, although the ground was so swampy in many places that they could scarcely walk about. At a short distance from the sea, Lieutenant Hoppner discovered a large mass of iron-stone, which was found to attract the magnet very powerfully. There were no traces of inhabitants to be seen on this part of the coast. Part of the vertebræ of a whale was found at some distance from the beach; but this had probably been carried there by bears,

the tracks of which were visible on the moist soil. The only birds seen were a few ptarmigans and snow buntings.

As soon as the boats returned, the ships hove to the southward, along the edge of the ice which led them nearer the eastern shore, so that by midnight the channel in which they were sailing was narrowed to about five miles. They could find no soundings; the weather was beautifully serene, and the sun, for the second time that season, just dipped below the northern horizon, and re-appeared a few minutes after.

A dark sky to the southwest had given them hopes of finding a westerly passage to the south of the ice along which they were now sailing; more especially as the inlet began to widen considerably as they advanced in that direction: but at three, A. M., on the morning of the 8th, they perceived that the ice ran close in with a point of land bearing S. by. E. from us, and which appeared to form the southern extremity of the eastern shore. To this extreme point Capt. Parry gave the name of Cape Kater. With the increasing width of the inlet, they had flattered themselves with increasing hopes; but they soon experienced the mortification of disappointment. The prospect from the crow's nest began to assume a very unpromising appearance, the whole of the western horizon, from north round to S. by. E., being completely covered with ice, consisting of heavy and extensive floes, beyond which no indication of water was visible; instead of which there was a bright and dazzling ice-blink extending

from shore to shore. The western coast of the inlet, however, trended much more to the westward than before, and no land was visible to the southwest, though the horizon was so clear in that quarter, that, if any had existed of moderate height, it might have been easily seen at this time, at the distance of ten or twelve leagues. From these circumstances, the impression received at the time was, that the land, both on the eastern and western side of this inlet, would be one day found to consist of islands. As a fresh northerly breeze was drifting the ice rapidly towards Cape Kater, and there appeared to be no passage open between it and that cape, Capt. Parry did not consider it prudent, under such circumstances, to run the ships down to the point, or to attempt to force a passage through the ice, and therefore hauled to the wind, with the intention of examining a bay which was abreast of them, and to which the name of Fitzgerald Bay was given.

A boat from each ship was prepared to conduct this examination, and they stood in to drop them in-shore, but found, as they approached, that the bay was so filled with ice, as to render it impracticable for any boat to land. Capt. Parry therefore determined, as the season was fast advancing to a close, to lose no time in returning to the northward, in the hope of finding the channel between Prince Leopold's Isles and Maxwell Bay more clear of ice than when they left it, in which case there could be little doubt of effecting a passage to the westward; whereas, in their present situation,

there appeared no prospect of doing so without risking the loss of more time than he deemed it prudent to spare.

The distance which they sailed to the southward in this inlet was about one hundred and twenty miles, Cape Kater being, by the observations, in lat. $71^{\circ} 53' 30''$, long. $90^{\circ} 03' 45''$. As they returned to the northward with a light but favorable breeze, they found that the ice had approached the eastern shore of the inlet, leaving a much narrower channel than that by which they had entered; and in some places it stretched completely across to the land on this side, while the opposite coast was still as inaccessible as before.

On the tenth, the weather was thick, with snow, which was succeeded by rain and fog. The compass being useless and the sun invisible, they stood off-and-on, near the ice till evening, when the weather becoming clear, they steered northward, keeping as near the western shore as the ice would permit. At eleven, P. M. they were stopped by the ice, which extended to the land on the eastern side of the inlet. This part of the coast is much higher than that farther to the southward.

A fog arising, the ships were moored to a floe, but when the atmosphere cleared, they found themselves drifting with the floe upon another body of ice to leeward. They therefore cast off, and beat to the northward, which was attended with great difficulty on account of the drift ice, with which the whole inlet was now covered.

Thus were several days passed in contending with

fogs, head winds, and all the difficulties of arctic navigation. Neither officers nor crews lost health or spirits. If they repined at finding themselves in such a situation, it was not on account of the danger or labor, but because the accomplishment of their hopes was delayed.

The twelfth being the birthday of the Prince Regent of England, very naturally suggested the name of the inlet in which they were sailing, and by which it is distinguished on the maps. Capt. Parry thinks that a passage may at some future time be found through it to Hudson's Bay, or the sea on the northern shore of America.

The weather was beautifully calm and clear on the 13th, when, being near an opening in the eastern shore, Capt. Parry took the opportunity of examining it in a boat. It proved to be a bay, a mile wide at its entrance, and three miles deep in an E. by S. direction, having a small but snug cove on the north side, formed by an island, between which and the main land is a bar of rocks, [which completely shelters the cove from sea or drift ice. The water was so deep, that in rowing close along the shore they could seldom get bottom with seven fathoms of line. The cliffs on the south side of this bay, to which the name of Port Bowen was given, resemble, in many places, ruined towers and battlements; and fragments of the rocks were constantly falling from above. At the head of the bay is an extensive piece of low, flat ground, intersected by numerous rivulets, which, uniting at a short distance from the beach, formed a deep and rapid

stream, near the mouth of which he landed. This spot was extremely barren, the ground being almost entirely covered with small pieces of slaty limestone, among which no vegetation appeared for more than a mile, to which distance Mr Ross and Capt. Parry walked inland, following the banks of the stream. Among the fragments, they picked up one piece of limestone, on which was the impression of a fossil-shell, and saw a great number of young black guillemots, and a flock of ducks, which they supposed to be of the eider species.

The latitude observed at the mouth of the stream was $73^{\circ} 12' 11''$, and the longitude, by chronometers, $89^{\circ} 02' 08''$. From twenty minutes past eleven till a quarter after twelve, the tide rose by the shore six inches, and the high-water mark was between two and three feet above this; but they were not long enough on shore to form a correct judgment of the time at which high water takes place. About three-quarters of a mile to the southward of Port Bowen is another small bay, which they had not time to examine.

CHAPTER IV.

Appearance of the Land about Jackson's Bay.—Favorable Prospect to the Westward.—Gascoyne's Inlet discovered.—Farther Discoveries.—Barrow's Strait.

WHEN they had returned on board, a light southern breeze enabled them to steer towards Prince Leopold's Isles, which they found more encumbered with ice than before. The narwhales were here very numerous; these animals appear fond of remaining with their backs exposed above the surface of the water, in the same manner as the whale, but for a much longer time; and they frequently also observed their horns erect, and quite stationary for several minutes together. Three or four miles to the northward of Port Bowen, they discovered another opening, having every appearance of an harbour, with an island near the entrance. It was named Jackson's Bay. The whole of the 14th was consumed in a vain attempt to find an opening in the ice, which remained perfectly close and compact, and as it continued in the same state on the 15th, Capt. Parry went on shore to make observations. He landed in one of the numerous valleys, or ravines, which occur on this part of the coast, and which, at a few miles' distance, very much resemble bays, being bounded by high hills, which have the appearance of bluff head-lands. He found the water very deep close to the beach, which is composed of rounded limestones, and on which

there was no surf; he then ascended, with some difficulty, the hill on the south side of the ravine, which is very steep, and covered with innumerable detached blocks of limestone, some of which are constantly rolling down from above, and which afford a very insecure footing. From the top of this hill, which is about six or seven hundred feet above the level of the sea, and which commands an extensive view to the westward, the prospect was by no means favorable to the immediate accomplishment of the enterprize. No water could be seen over the ice to the northwest, and a bright and dazzling blink covered the whole space comprised between the islands and the northern shore. It was a satisfaction, however, to find that no *land* appeared which was likely to impede his progress; and he had been too much accustomed to the obstruction occasioned by ice, and too well aware of the suddenness with which that obstruction is often removed, to be at all discouraged by present appearances.

On the top of this hill he deposited a bottle, containing a short notice of his visit, and raised over it a small mound of stones; of these he found no want, for the surface was covered with small pieces of schistose limestone, but nothing like soil or vegetation could be seen. He found a great quantity of madreporite among the lime, and at the foot of the hill met with one large piece, of the basaltiform kind. Several pieces of flint were also picked up on the beach. The insignificance of the stream which here emptied itself into the sea, formed, as

usual, a striking contrast with the size of the bed through which it flowed, the latter being several hundred feet deep, and two or three hundred yards wide.

The wind was light the next day, and being hemmed in by ice or land on all sides, the ships scarcely changed their position. An experiment was made relative to the tide, which proved to flow from the southward, thus demonstrating that a passage exists through Prince Regent's Inlet.

There being no prospect of penetrating westward in the neighborhood of Prince Leopold's Isles, Capt. Parry determined to stand toward the northern shore again; and after beating for some hours among the drift ice, the ships got into clear water near the coast. There was just light enough at midnight to see to read and write in the cabins.

On the 19th a snow-storm came on, and lasted two days, during which the ships were beating about, sometimes in great danger. This did not, however, hinder the indefatigable Parry from giving his attention to the survey of the coast, and several bays, capes, and inlets found place on the map in consequence. Passing along the shore, the ships left the ice behind, and on the 21st, there was nothing to impede their passage westward but want of wind. The narwhales were blowing around them in every direction, and three walruses were seen upon a piece of ice.

Advancing slowly to the westward, a considerable opening was discovered, which was named Gascoyne's Inlet. The cliffs on this part of the coast

were observed to be of secondary limestone. There was little or no vegetation at the only place where they had an opportunity to land; but as they observed traces of reindeer, the interior of the country cannot be altogether unproductive.

The wind freshening, all sail was made to the westward, where the prospect began to wear a more and more interesting appearance. It was soon perceived, as they proceeded, that the land, along which they were sailing, and which, with the exception of some small inlets, had appeared to be hitherto continuous from Baffin's Bay, began now to trend much to the northward, leaving a large open space between that coast and a distant land to the westward, which appeared like an island, of which the extremes to the north and south were distinctly visible. The latter was a remarkable headland, having at its extremity two small table-hills, somewhat resembling boats turned bottom upwards, and was named Cape Hotham. At sunset they had a clear and extensive view to the northward, between Cape Hotham and the eastern land. On the latter several headlands were discovered and named; between the northernmost of those called Cape Bowden, and the island to the westward, there was a channel of more than eight leagues in width, in which neither land nor ice could be seen from the mast-head. To this noble channel Capt. Parry gave the name of Wellington. The arrival off this grand opening was an event for which they had long been looking with much anxiety and impatience; for the continuity of land to

the northward had always been a source of uneasiness to them, principally from the possibility that it might take a turn to the southward and unite with the coast of America. The appearance of this broad opening, free from ice, and of the land on each side of it, more especially that on the west, leaving scarcely a doubt of the latter being an island, relieved them from all anxiety on that score; and every one thought that they were now finally disentangled from the land which forms the western side of Baffin's Bay; and that, in fact, they had actually entered the Polar Sea. Fully impressed with this idea, Capt. Parry gave to this magnificent opening the name of Barrow's *Strait*.

CHAPTER V.

Further Progress of the Expedition.—New Discoveries.—Bathurst's Island.—
Novel Expedient in Navigation.

Two thirds of the month of August had now elapsed, and they expected that the sea would remain navigable six weeks more. The ships had suffered no injury, they had plenty of provisions, the crews were in high health and spirits, and the sea before them, if not open, was at least navigable. Officers and men united in a zealous determination to accomplish, by all possible exertions, the great object on which they were employed.

On the 23d, a fresh breeze sprung up, and every

appearance indicated an unobstructed passage westward. Wellington Channel, to the northward, was as open as might be, but as it lay at right angles with their course, and there was still a large opening south of Cornwallis' Island, Capt. Parry judged it most advisable to try the latter. The wind was fair and the navigators experienced that exhilaration which is produced by rapid motion of any kind, heightened by contrast with the slow and tedious progress they had hitherto made. Their disappointment was the greater, when in the midst of these favourable appearances, it was suddenly reported from the crow's nest, that a body of ice barred the passage between Cornwallis' Island and the land to the southward. As they approached this obstacle, after lying to for an hour, Lieut. Beechy discovered that one narrow part of the barrier appeared to consist of loose pieces of heavy ice detached from the main body, and that beyond this there was a considerable extent of open water.

The Hecla was immediately pushed into this part of the ice, and after a quarter of an hour's 'boring,' during which the breeze had, as usual, nearly deserted her, succeeded in forcing her way through the neck. The Griper followed in the opening which the Hecla had made, and they continued their course to the westward, having once more a navigable sea before them.

They now remarked, that a very decided change had taken place in the character of the land to the northward since leaving Beechey Island; the coast near the latter being bold and precipitous next the

sea, with very deep water close to it, while the shores of Cornwallis' Island rise with a gradual ascent from a beach which appeared to be composed of sand. Another opening in the southern shore was called Cunningham Inlet, and a very large one on the northern shore, Martin's Inlet.

At two, P. M. having reached longitude $95^{\circ} 67'$, they came to heavy and extensive floes, which obliged the ships to tack, as there was no passage between them. The rest of the afternoon was passed in beating to the northward in search of a passage, but none was found. On the contrary, the ice was in contact with the shore, from which it appeared not to have been detached this season. After several unsuccessful attempts to force a passage, they at last succeeded, by *boring* through several heavy streams. The ships received many severe shocks in this operation, but luckily sustained no essential damage, and at midnight were enabled to pursue their course to the westward.

Several low, sandy islands were observed, to which, as usual, names were given. The principal was called Bathurst Island. No whales or narwhales had been seen for several days, and it was remarked with some degree of uneasiness, that no living creature had this day been seen. They were, however, encouraged to find that while the sea beyond them was covered for the most part with heavy ice, yet that a channel of sufficient breadth was open between it and the lee shore of Bathurst Island. This ice lay in very large fields, covered with hummocks.

The ships made very little way this night, but in the morning early they advanced with more speed, and more land was seen to the westward. The space to the westward was so broad, and the prospect from the mast-head so flattering, that Capt. Parry thought proper to appoint a place where the Griper should find the Hecla, in case of separation by the difference of sailing. But about seven, P. M. the precaution was found to have been needless, for the ice stretched across the strait, and barred the passage. This ice was covered with stones, sand, and in some places with moss.

Finding no passage on the south side of the island, Capt. Parry resolved to seek one along the northern shore. As the vessels were rounding the eastern point, Capt. Sabine and other officers were despatched to make the requisite observations, and to examine the natural productions of the shore. A thick fog came on soon after the boat had landed, and the ships stood off and on, firing signal guns, which were at length answered by musquets from the boat, which came on board in safety.

The gentlemen reported, on their return, that they had landed on a sandy beach, near the east point of the island, which they found to be more productive, and altogether more interesting than any other part of the shores of the polar regions which they had yet visited. The remains of Esquimaux habitations were found in four different places. Six of these, which Captain Sabine had an opportunity of examining, and which are situated on a level sandy bank, at the side of a small ravine near the sea, are

described by him as consisting of stones rudely placed in a circular, or rather an elliptical form. They were from seven to ten feet in diameter, the broad, flat sides of the stones standing vertically, and the whole structure, if such it may be called, being exactly similar to that of the summer huts of the Esquimaux, which had been seen the preceding year. Attached to each was a smaller circle, about four or five feet in diameter. The small circles were placed indifferently, as to their direction from the huts to which they belonged; and from the moss and sand which covered some of the lower stones, particularly those which composed the flooring of the huts, the whole encampment appeared to have been deserted for several years. Very recent traces of the rein-deer and musk-ox were seen in many places; and a head of the latter, with several rein-deers' horns, was brought on board. A few patches of snow remained in sheltered situations; the ravines, however, which were numerous, bore the signs of recent and considerable floods, and their bottoms were swampy, covered with very luxuriant moss, and other vegetation, the character of which differed very little from that of the land at the bottom of Possession Bay.

The latitude of the place of observation was $75^{\circ} 09' 23''$, and the longitude, by chronometers, $103^{\circ} 44' 37''$. The dip of the magnetic needle was $88^{\circ} 35' 58''$, and the variation was now found to have changed from $128^{\circ} 58'$ west, in the longitude of $91^{\circ} 48'$, where their last observation on shore had

been made, to $165^{\circ} 50' 09''$ east, at our present station; so that they had, in sailing over the space included between those two meridians, crossed immediately to the northward of the magnetic pole, and had undoubtedly passed over one of those spots upon the globe, where the needle would have been found to vary 180° , or, in other words, were its north pole would have pointed due south. This spot would, in all probability, at this time, be somewhere not far from the meridian of 100° west of Greenwich.

Such an observation would have been highly interesting, but considering the precarious nature of this navigation, Capt. Parry did not feel himself justified in making the stay it would have required.

The fogs now froze hard upon the rigging, which made it very laborious to work the ship, as each rope was thus increased to twice or three times its proper diameter. On the evening of the 29th a very thick fog came on, and they sailed under such circumstances as have seldom occurred in navigation. Having observed that in this strait the wind always blew some hours steadily from one quarter, the quarter-masters steered by the vane at the mast-head; instead of the compass, which was here utterly useless. At night it was impossible to sail in any degree of security, and the ships were made fast to a floe till morning. The floe was not more than six or seven feet thick, and was covered with numerous pools of water, all hard frozen. The officers amused themselves in skating upon the pools, and the men in sliding, football, and other games.

Thus the ships remained till the morning of the thirtyfirst, when a new expedient for sailing was adopted.

Before the fog commenced, and while they were sailing on the course which by the bearings of the land they knew to be the right one, the Griper was exactly astern of the Hecla, at the distance of about a quarter of a mile. The weather being fortunately not so thick as to prevent still seeing her at that distance, the quarter-master was directed to stand aft, near the taffrail, and to keep her constantly astern, by which means they contrived to steer a tolerably straight course to the westward. The Griper, on the other hand, naturally kept the Hecla right a-head; and thus, however ridiculous it may appear, it is, nevertheless, true, that they steered one ship entirely by the other for a distance of ten miles out of sixteen and a half, which they sailed between one and eleven, P. M. It then being rather dark, and the water having become shallow, it was not considered prudent to proceed farther in that direction.

CHAPTER VI.

Some Description of the Shores of Melville Island.—The Ships' Companies win the Premium for penetrating to Longitude 110° West from Greenwich.—Bay of the Hecla and Griper.—Farther Proceedings.—Loss and Sufferings of a Hunting Party.

THE morning of the first of September brought a breeze, and with it a snow-storm, so that they were unable to shape their course till the afternoon, when the weather cleared, and a small, low island was discovered.

At one, on the 2d, a star was seen, the first that had been visible for more than two months. The fog came on again, and there was not wind enough to enable them to keep the ships under command, which caused them to receive very hard blows, though the ice was loose enough to have allowed a tolerably easy passage, with a moderate wind. As none of the pieces were large enough to make the ships fast to, after the usual manner, they could only heave to, to windward of the larger masses, and drift with them. In the afternoon they stood in for the land, and at one, P. M. Capt. Parry went on shore, and was joined by the Griper's boats. They landed on a very flat, sandy beach, which did not allow the boats to come nearer than their own length. The basis of this land is sandstone; but they met with limestone also, occurring in loose pieces on the surface, and several lumps of coal were brought in by the parties who had traversed

the island in different directions. The sportsmen were by no means successful, having seen only two deer, which were too wild to allow them to get near them. The dung of these animals, however, as well as that of the musk-ox, was very abundant, especially in those places where the moss was most luxuriant; every here and there they came to a spot of this kind, consisting of one or two acres of ground, covered with a rich vegetation, and which was evidently the feeding-place of those animals, there being quantities of their hair and wool lying scattered about. Several heads of the musk-ox were picked up, and one of the Hecla's seamen brought to the boat a narwhale's horn, which he found on a hill more than a mile from the sea, and which must have been carried thither by Esquimaux or by bears. Three or four brace of ptarmigan were killed, and these were the only supply of this kind which they obtained. Sergeant Martin of the artillery, and Captain Sabine's servant, brought down to the beach several pieces of a large fir tree, which they found nearly buried in the sand, at the distance of three or four hundred yards from the present high-water mark, and not less than thirty feet above the level of the sea. They found no indication of this part of the island having been inhabited, unless the narwhale's horn, above mentioned, be considered as such.

The latitude of the place of observation here, which was within a hundred yards of the beach, was $74^{\circ} 58'$, the longitude, by chronometers, $107^{\circ} 03' 31''.7$, and the variation of the magnetic needle

151° 30' 03" easterly. At the top of a hill, immediately above the place of observation, and about a mile from the sea, a bottle was buried, containing the usual information. A mound of sand and stones was raised over it, with a boarding-pike fixed in the middle.

On the morning of the third, a northern breeze again enabled them to make some progress. The farthest land to the westward was a point which they found much difficulty in passing, for the ice had closed in upon the land. They made tolerable progress this day, and on the 4th, at nine, P. M. crossed the meridian of 110° west from Greenwich, in latitude 74° 44' 20", by which the ships' companies became entitled to a reward of five thousand pounds, offered by the King's order in council, 'to such British subjects as might penetrate so far west within the Arctic Circle.'

On the 5th, they found the passage blocked up again, and stood off and on, waiting for an opening to occur; but no change taking place, and a heavy gale coming on, the ships anchored in a tolerable roadstead, a mile and a half from the northern shore. In the evening, Capt. Sabine and some of the other officers went on shore. They landed on a low point a little to the westward of the ships, which they found to be a very barren and unproductive spot; several flocks of ducks were seen, and some glaucous gulls and tern; the dung and foot-tracks of the deer and musk-ox were also observed in many places; and some addition was made by the gentlemen to their collection of marine insects.

The rocks are composed entirely of sandstone ; but a few small pieces of granite, flint, and coal, were also among the specimens brought on board. This island was named Melville Island, and the roadstead where the ships lay was called, The Bay of the Hecla and Griper.

The Bay of the Hecla and Griper was the first place where they had dropped anchor since leaving England, a circumstance which seemed to mark the completion of one stage of the voyage. The flags were hoisted as soon as the ships anchored, in honor of the epoch ; the first time that the eye of civilized man had looked on that barren and inhospitable region.

In the afternoon of the 6th, the ice was observed to be in motion, and the ships got under way, and penetrated through it, and sailed a short distance. They were again beginning to indulge in flattering hopes, when a compact body of ice was observed from the crow's nest, extending quite across their intended passage. They ran sufficiently close to be assured that the floes joined the shore, and that no opening existed, nor was any clear water to be seen beyond them from the mast-head. The ships were therefore secured to a floe ; for the season was now so far advanced as to make it necessary to secure them every night from ten till two o'clock, the weather being too dark to allow them to keep under way.

It being found that the situation in which the ships lay was such as to expose them to be nipped between the floes, in case of a change in the posi-

tion of the ice, Capt. Parry determined to remove them nearer to the land. Two large masses lay aground, and the vessels were secured between them and the shore. These masses were from twenty to thirty feet high from the water, and about the length of the ships, each. They appeared to have been forced upon the beach by an enormous pressure from without. The parties from the shore returned with a white hare, several fine ptarmigans, a few snow-buntings, some skulls of the musk-ox, and several reindeers' horns; but they were not fortunate enough to meet with either of the two latter animals. The island is here, as in the other parts on which they had landed, principally composed of sand-stone, of which some spherical nodules, one of them as large as a nine-pound shot, were brought on board. Several lumps of coal, which was here more abundant than they had yet found it, were also picked up, and were found to burn with a clear lively flame, like cannel coal, but without splitting and crackling in the same manner.

On the 9th, their mortification was great to perceive that not only the ice was as close as ever to the westward, but the floes in their immediate neighbourhood were approaching the shore. On the 10th, it snowed. At five, A. M. a floe ran against the berg within which the Hecla was secured, and turned it round, as on a pivot. They were by this time so surrounded with ice that no clear water was to be seen, and all that could be done was to attend carefully to the safety of the ships. A party returned in the evening from a shooting

excursion, and reported that the sea was covered with ice as far as they could see from the hill-tops.

On the eleventh, there was no alteration in appearances, and a party sent to observe the ice returned with the news that all was equally unpromising farther on. One of the officers killed the first musk-ox that they had yet been able to approach.

They now began to be alarmed for the fate of a shooting party that had left the Griper two days before, and parties went in search of them. In the evening of the 12th they arrived. They had lost their way a few hours after leaving the ship, and had wandered about they knew not whither, till they saw a flag-staff that had been set up for their guidance. At night they had halted, made a little fire to keep their feet from freezing, and put up a small hut of stones to shelter them from the weather. They had not been in actual want of food, having lived upon raw grouse, of which they had enough to subsist upon. The whole party were much exhausted with cold and fatigue, and several of them had their fingers and toes severely frost-bitten. Before midnight, after their return, the thermometer fell to 15° , and a hard gale gave them reason to be thankful that their absence had not been longer protracted.

CHAPTER VII.

The Ships return to the Bay of the Hecla and Griper, and take up a Position for the Winter.—Proceedings at Winter Harbor.—Internal Arrangements of the Ships.

THE packed ice remaining immoveable, and the 'young' ice rapidly forming, farther progress was considered impracticable that season. Capt. Parry thought it best to run back to the Bay of the Hecla and Griper and to pass the winter there. The other officers concurring with him in opinion, the signal to weigh anchor was given on the 22d, and the crews began to heave at the cables; but so stiff had they become with frost, and so much ice had accumulated upon them, that it was five, P. M. before the anchors were brought on board. Their retrograde movement was so much impeded by the ice that had formed behind them, that they did not reach the anchorage till the evening of the next day.

A proper place being found, the ships dropped anchor on the edge of the bay ice in the evening of the 24th, in order to commence operations. A line for a canal was marked upon the ice by a row of boarding-pikes, and every officer and man was employed in the work, which went on as follows. Two parallel lines were marked out, a little more than the breadth of the ships apart. Along each of these lines a cut was then made with an ice-saw,

and others again at right angles to them, at intervals of from ten to twenty feet; thus dividing the ice into a number of rectangular pieces, which it was again necessary to subdivide diagonally, in order to give room for their being floated out of the canal. Capt. Parry returning from the upper part of the harbour, where he had marked out what appeared to be the best situation for winter-quarters, found that considerable progress had been made in cutting the canal, and in floating the pieces out of it. To facilitate the latter part of the process, the seamen, who are always fond of doing things in their own way, took advantage of a fresh northerly breeze, by setting some boats' sails upon the pieces of ice, a contrivance which saved both time and labor. This part of the operation, however, was by far the most troublesome, principally on account of the quantity of young ice which formed in the canal, and especially about the entrance, where, before sun-set, it had become so thick that a passage could no longer be found for the detached pieces, without considerable trouble in breaking it. At half past seven, P. M. they weighed their anchors, and began to warp up the canal; but the northerly wind blew so fresh, and the people were so much fatigued, having been almost constantly at work for nineteen hours, that it was midnight before they reached the termination of their first day's labor. While they were thus employed, about nine o'clock a vivid flash of light was observed, exactly like lightning. There was at the same time, and during the greater part of the night, a permanent bright-

ness in the northern quarter of the heavens, which was probably occasioned by the Aurora Borealis.

All hands were again set to work on the morning of the 25th, when it was proposed to sink the pieces of ice, as they were cut, under the floe, instead of floating them out, the latter mode having now become impracticable on account of the lower part of the canal, through which the ships had passed being hard frozen during the night. To effect this, it was necessary for a certain number of men to stand upon one end of the piece of ice which it was intended to sink, while other parties, hauling at the same time upon ropes attached to the opposite end, dragged the block under that part of the floe on which the people stood. The officers of both ships took the lead in this employ, several of them standing up to their knees in water frequently during the day, with the thermometer generally at 12° , and never higher than 16° . At six, P. M. they began to move the ships. The Griper was made fast astern of the Hecla, and the two ships' companies being divided on each bank of the canal, with ropes from the Hecla's gangways, soon drew the ships along to the end of their second day's work.

The next day was Sunday, but it being a matter of absolute necessity to get the ships into security with despatch, the work was continued. At noon, the whole canal was completed; a length of four thousand and eightytwo yards, through ice seven inches thick. By half past one the ships were warped to their winter positions; an event which

was hailed with three hearty cheers from the crews. They were in five fathoms water, a cable's length from the beach of the northwestern side of the harbor. The wintering ground received the name of Winter Harbor ; and the group of which the island formed a part was denominated North Georgian Islands, in honor of the reigning sovereign of Great Britain.

Having thus reached the place where they were probably to pass nine months, three of them in the absence of the sun, Capt. Parry found himself called upon to act in circumstances in which no British naval officer had ever before been placed. The security of the ships and the preservation of the stores were the most immediate duties, and he lost no time in going about it. A regular system for the maintenance of good order, cleanliness, and consequently, health, were equal claims on his attention. Amusement was to be found for the men, as well as employment to relieve the tedium of so cheerless a sojourn, and scientific observations were to be made. In no point was the gallant officer and hardy navigator found wanting, and he was ably seconded by the officers under his command. A brief account of their proceedings will not only be amusing, but convey the best knowledge of that dreary region.

Immediately on their arrival in harbor, Captain Sabine had employed himself in selecting a place for an observatory, which was erected in a convenient spot, about seven hundred yards to the westward of the ships. It was also considered

advisable immediately to set about building a house near the beach, for the reception of the clocks and instruments. For this purpose, they made use of a quantity of fir-plank, which was intended for the construction of spare boats, and which was so cut as not to injure it for that purpose. The ground was so hard frozen that it required great labor to dig holes for the upright posts which formed the support of the sides. The walls of this house being double, with moss placed between the two, a high temperature could, even in the severest weather which they might be doomed to experience, be kept up in it without difficulty by a single stove.

Not a moment was lost, in the commencement of operations. The whole of the masts were dismantled, except the lower ones and the *Hecla's* main-top-mast; the lower yards were lashed fore and aft amidships, to support the planks of the housing intended to be erected over the ships; and the whole of this frame-work was afterwards roofed over with a cloth. The boats, spars, running rigging, and sails were removed on shore; and as soon as the ships were secured and housed over, Capt. Parry's whole attention was directed to the health and comfort of the officers and men. The surgeon reported that not the slightest disposition to scurvy had shown itself in either ship.

In order to prolong this healthy state of the crews, and to promote the comfort of all, such arrangements were made for the warmth and dryness of the births and bed-places, as circumstances ap-

peared to require ; and in this respect some difficulties were to be overcome, which could not, perhaps, have been anticipated. Soon after their arrival in Winter Harbor, when the temperature of the atmosphere had fallen considerably below zero of Fahrenheit, it was found that the steam from the coppers, as well as the breath and other vapor generated in the inhabited parts of the ship, began to condense into drops upon the beams and the sides to such a degree as to keep them constantly wet. In order to remove this serious evil, it was necessary to adopt such means for producing a sufficient warmth, combined with due ventilation, as might carry off the vapor, and thus prevent its settling on any part of the ship. For this purpose a large stone oven, cased with cast-iron, in which all their bread was baked during the winter, was placed on the main-hatchway, and the stove-pipe led fore and aft on one side of the lower deck, the smoke being thus carried up the fore hatchway. On the opposite side of the deck, an apparatus had been attached to the galley-range for conveying a current of heated air between decks. This apparatus simply consisted of an iron box, or air-vessel, about fifteen inches square, through which passed three pipes, of two inches diameter, communicating from below with the external air, and uniting above in a metal box, fixed to the side of the galley-range ; to this box a copper stove-pipe was attached, and conveyed to the middle part of the lower deck. When a fire was made under the air-vessel, the air became heated in its passage through the three pipes, from which it was conveyed through the

stove-pipe to the men's births. While this apparatus was in good order, a moderate fire produced a current of air of the temperature of 87° , at the distance of seventeen feet from the fire-place; and, with a pipe of wood, or any other imperfect conductor of heat, which would not allow of its escaping by the way, it might undoubtedly be carried to a much greater distance. By these means they were enabled to get rid of the moisture about the births where the people messed; but when the weather became more severely cold, it still accumulated in the bed-places occasionally to a serious and very alarming degree. Among the means employed to prevent the injurious effects arising from this annoyance, one of the most efficacious perhaps was a screen made of fear-nought, fixed to the beams round the galley, and dropping within eighteen inches of the deck, which served to intercept the steam from the coppers, and prevent it from curling along the beams, as before, and condensing upon them into drops. This screen was especially useful at the time of drawing off the beer, which they had lately been in the habit of brewing from essence of malt and hops, and which continued to be served for several weeks as a substitute for part of the usual allowance of spirits. They found the steam arising from this process so annoying during the cold weather, that, valuable as the beer must be considered as an antiscorbutic beverage, it was deemed advisable to discontinue their brewery on that account. When the weather became severely cold, they could not get the beer to ferment, so as to make it palatable.

CHAPTER VIII.

Mode of serving out Provisions and Fuel.—Theatre.—Weekly Newspaper.—
Emigration of the Reindeer.—A White Bear.—Intense Cold.

FOR the preservation of health, and as a necessary measure of economy, a few alterations were made in the quantity and quality of the provisions issued. The allowance of bread was permanently reduced to two-thirds, a precaution which, perhaps, it would have been as well to have adopted from the commencement of the voyage. A pound of preserved meat, together with one pint of vegetable or concentrated soup per man, was substituted for one pound of salt beef weekly; a proportion of beer and wine was served in lieu of spirits; and a small quantity of sourkrout and pickles, with as much vinegar as could be used, was issued at regular intervals. The daily proportion of lime-juice and sugar was mixed together, and, with a proper quantity of water, was drank by each man, in presence of an officer appointed to attend to this duty. The latter precaution may appear to have been unnecessary, to those who are not aware how much sailors resemble children in all those points in which their own health and comfort are concerned. Whenever any game was procured, it was directed to be invariably served in lieu of, and not in addition to, the established allowance of other meat, except in a few extraordinary cases, when such an indulgence was allowed; and in no one instance, either in

quantity or quality, was the slightest preference given to the officers.

In the article of fuel, which is of such vital importance in so severe a climate, a system of the most rigid economy was adopted; such a quantity of coal only being expended, as was barely sufficient for the preservation of health on board the ships. A search was made for turf or moss, immediately after their arrival, and a small quantity of the latter was made use of as fuel; but, without a previous drying, which, from the advanced period of the season, they had no means of giving it, it was found to be too wet to produce any saving of coals. They also looked out most anxiously for a vein of coal on shore, but only a few lumps were picked up during their stay in Winter Harbour.

Great attention was paid to the clothing of the men, and one day in the week was appointed for the examination of the men's shins and gums by the medical gentlemen, in order that any slight appearance of the scurvy might at once be detected, and checked by timely and adequate means.

Whenever a blanket was brought on deck, and suffered to remain there for a short time, it of course acquired the temperature of the atmosphere. When this happened to be rather low, under zero of Fahrenheit for instance, the immediate consequence, on taking the blanket again into the inhabited parts of the ship, was, that the vapor settled and condensed upon it, rendering it almost instantly so wet as to be unfit to sleep on, and requiring, therefore, after all, that it should be dried by artificial heat

before it could be returned into the bed-place. They were, therefore, under the necessity of hanging the bedding upon lines between decks, as the only mode of airing it; and what was likely to prove still more prejudicial, they were obliged to have recourse to the same unhealthy measure in drying the washed clothes.

Under circumstances of leisure and inactivity, such as they were now placed in, and with every prospect of its continuance for a very large portion of the year, Capt. Parry was desirous of finding some amusement for the men during this long and tedious interval. He proposed, therefore, to the officers, to get up a play occasionally on board the *Hecla*, as the readiest means of preserving among the crews that cheerfulness and good humor which had hitherto subsisted. In this proposal he was readily seconded by the officers of both ships; and Lieutenant Beechey having been duly elected stage-manager, their first performance was fixed for the 5th of November, to the great delight of the ships' companies. In these amusements Capt. Parry gladly took a part himself, considering that an example of cheerfulness, by giving a direct countenance to everything that could contribute to it, was not the least essential part of his duty, under the peculiar circumstances in which they were placed.

In order still further to promote good humor, as well as to furnish amusing occupation, during the hours of constant darkness, they set on foot a weekly newspaper, which was to be called the *North*

Georgia Gazette and Winter Chronicle, and of which Captain Sabine undertook to be the editor, under the promise that it was to be supported by original contributions from the officers of the two ships: and, though some objection may, perhaps, be raised against a paper of this kind being generally resorted to in ships of war, Capt. Parry was too well acquainted with the discretion, as well as the excellent dispositions of his officers, to apprehend any unpleasant consequences from a measure of this kind: instead of which, the weekly contributions had the happy effect of employing the leisure hours of those who furnished them, and of diverting the mind from the gloomy prospect which would sometimes obtrude itself on the stoutest heart.

Among the fortunate circumstances of this season's navigation, none was more striking than the opportune time the ships got into harbour; for on the very night of their arrival the temperature fell to one degree, and on the next morning the sea was seen from the hill tops to be frozen over as far as the eye could reach, nor was any open water seen afterwards. During the first weeks of October the young ice was sometimes much squeezed by the larger floes, a proof that they had yet some room to move in; but after that time, the sea was covered with solid and motionless ice.

A few reindeer and coveys of grouse were seen, but the land was so bare that the sportsmen found no cover that might aid in approaching them, and they only killed three deer in all their excursions. The reindeer emigrated before the close of October,

leaving only bears, foxes, and wolves behind them. On the first of this month, a bear chased one of the men quite to the ships, where he was wounded with several balls, but nevertheless escaped. Another time a marine belonging to the Griper stayed so long on shore in pursuit of reindeer, that he would have perished of cold, if he had not been found and brought on board. His fingers were frozen quite stiff, so that notwithstanding the care and attention of the surgeon, it was found necessary to amputate three of them. It would seem, that the cold of this climate gives those who suffer its rigor every appearance of the last stage of intoxication, an effect we have never observed in a low temperature elsewhere.

All the water used on board the ships was procured by dissolving the snow, which was dug out of large drifts, and was quite pure and wholesome. In strong winds, the snow was so whirled about, that nothing could be seen more than a quarter of a mile. On such occasions, no person was permitted to leave the ships, for no human being could have borne such exposure an hour. In order to procure a communication between the ships a distance of a cable's length, and with the house on shore, a line was kept extended from one to the other. To prevent absent parties from losing themselves, guide-boards were erected on all the hills for three miles round. After the middle of October, whenever the snow fell, it consisted of very minute particles, in every form of crystallization. The meridian altitude of the sun was observed for the last time on the 16th of October.

About the 17th, the reindeer were seen in great numbers; but on the 20th, the sportsmen saw no living thing. On the 26th, the light was sufficient to allow of reading and writing in the cabins, from half past nine till half past two. The rest of the hours were spent by lamp light. Nothing could exceed the beauty of the sky to the southeast and southwest at sunrise and sunset about this period: near the horizon there was generally a rich bluish purple, and a bright arch of deep red above, the one mingling imperceptibly with the other. The weather about this time was remarkably mild, the mercury in the thermometer having stood at or above zero for more than fortyeight hours. By a register of the temperature of the atmosphere, which was kept by Captain Sabine at the observatory, it was found that the thermometer invariably stood at least from 2° to 5° , and even on one or two occasions as much as 7° higher on the outside of the ships than it did on shore, owing probably to a warm atmosphere created round the former, by the constant fires kept up on board.

It now became rather a painful experiment to touch any metallic substance in the open air with the naked hand; the feeling produced by it exactly resembling that occasioned by the opposite extreme of intense heat, and taking off the skin from the part affected. They found it necessary, therefore, to use great caution in handling the sextants and other instruments, particularly the eye-pieces of telescopes, which, if suffered to touch the face, occasioned an intense burning pain; but this was

easily remedied, by covering them over with soft leather. Another effect, with regard to the use of instruments, began to appear about this time. Whenever any instrument, which had been some time exposed to the atmosphere, so as to be cooled down to the same temperature, was suddenly brought below into the cabins, the vapor was instantly condensed all around it, so as to give the instrument the appearance of smoking; and the glasses were covered almost instantaneously with a thin coating of ice, the removal of which required great caution to prevent the risk of injuring them, until it had gradually thawed, as they acquired the temperature of the cabin. When a candle was placed in a certain direction from the instrument with respect to the observer, a number of very minute *spiculæ* of snow were also seen sparkling around the instrument, at the distance of two or three inches from it, occasioned by the cold atmosphere produced by the low temperature of the instrument almost instantaneously congealing into that form the vapor which floated in its immediate neighbourhood.

CHAPTER IX.

Opening of the Theatre.—Wolves and White Foxes.—Measures to obviate the Effects of the Cold.—Mode of Passing the Time.

NOVEMBER set in with mild weather. The fourth was the last day that the sun, independently of refraction, would be seen above the horizon for ninety-six days, but the weather was too thick to allow of making any observations. On the fifth their theatre opened with the representation of *Miss in her Teens*, which afforded the men a great fund of amusement. Even fitting up the theatre and taking it to pieces again, was a matter of no small importance, as it kept the men employed a day or two before and after each performance, which was a considerable object gained.

On the 11th, the thermometer fell to $-26\frac{1}{2}$ for the second time. The wolves began to approach the ships boldly, howling most piteously on the beach near, sometimes for hours together, and, on one or two occasions, coming alongside the ships, when everything was quiet at night; but they seldom saw more than one or two together, and, therefore, could form no idea of their number. These animals were always very shy of coming near the people, and, though evidently suffering much from hunger, never attempted to attack any of them. The white foxes used also to visit the ships at night, and one of these was caught in a trap set under the Griper's bows. The uneasiness dis-

played by this beautiful little animal during the time of his confinement, whenever he heard the howling of a wolf near the ships, gave rise to an opinion, that the latter is in the habit of hunting the fox as his prey.

The rapidity with which the ice now formed round the ships, was so great,³ as to employ the people several hours every day in cutting it, and their utmost labor could hardly keep them clear. Capt. Parry, therefore, gave orders to leave off cutting it during the severity of the winter. The average formation, while they continued to cut it, was from three to five inches a day, and the mean temperature was -12° .

The cold increasing about the middle of the month, the cracking of the timbers was very frequent and loud for a time; but generally ceased altogether in an hour or two after this fall had taken place in the thermometer, and did not occur again at the same temperature during the winter. The wind blowing fresh from the northward, with a heavy snow-drift, made the ship very cold below; so that the breath and other vapor accumulated during the night in the bed-places and upon the beams, and then immediately froze; hence it often occupied all hands for two or three hours during the day to scrape the ice away, in order to prevent the bedding from becoming wet by the increase of temperature occasioned by the fires. It was therefore found necessary to keep some of the fires in between decks at night, when the thermometer was below -15° or -20° in the open air, especially when the

wind was high. To assist in keeping the lower decks warm, as well as to retard, in some slight degree, the formation of ice immediately in contact with the ships' bends, they banked the snow up against their sides, as high as the main-chains; and canvass screens were nailed round all the hatchways on the lower deck.

The stars of the second magnitude in Ursa Major were perceptible to the naked eye a little after noon on the 11th, and the Aurora Borealis appeared faintly in the southwest at night.

The cold continued to increase. About the middle of December, a serious loss took place in the bursting of the bottles of lemon juice, the whole contents often freezing into a solid mass, except a small portion of highly concentrated acid in the centre, which in most instances leaked out, so that the ice remaining was little better than water. The loss of this valuable antiscorbutic increased to an alarming degree: in some boxes which were inspected, two thirds of the contents were found to be destroyed, and the remainder rendered inefficient. The vinegar also froze in the same manner, and lost much of its acidity when thawed. A few gallons of very highly concentrated vinegar, congealed into a consistence like honey.

Though it might be supposed that the time would have dragged heavily in such a situation and in such a climate, the case was in fact very different. So fully occupied was the time of both officers and men, that its quick flight was matter of general remark. The manner in which the days and hours

were employed during a total darkness of three months, may not perhaps be wholly uninteresting. The officers and quarter-masters were divided into four watches, which were regularly kept, as at sea, while the remainder of the ship's company were allowed to enjoy their night's rest undisturbed. The hands were turned up at a quarter before six, and both decks were well rubbed with stones and warm sand before eight o'clock, at which time, as usual at sea, both officers and men went to breakfast. Three quarters of an hour being allowed after breakfast for the men to prepare themselves for muster, they then beat to divisions punctually at a quarter past nine, when every person on board attended on the quarter-deck, and a strict inspection of the men took place, as to their personal cleanliness, and the good condition, as well as sufficient warmth, of their clothing. The reports of the officers having been made to Capt. Parry, the people were then allowed to walk about, or, more usually, to run round the upper deck, while he went down to examine the state of that below. The state of this deck may be said, indeed, to have constituted the chief source of anxiety, and to have occupied by far the greatest share of attention at this period. Whenever any dampness appeared, or, what more frequently happened, any accumulation of ice had taken place during the preceding night, the necessary means were immediately adopted for removing it; in the former case, usually by rubbing the wood with cloths, and then directing the warm air-pipe towards the place; and in the latter, by scraping off

the ice, so as to prevent its wetting the deck by any accidental increase of temperature. In this respect, the bed-places were particularly troublesome; the inner partition, or that next the ship's side, being almost invariably covered with more or less dampness or ice, according to the temperature of the deck during the preceding night. This inconvenience might to a great degree have been avoided, by a sufficient quantity of fuel to keep up two good fires on the lower deck, throughout the twentyfour hours; but the stock of coals would by no means permit this, bearing in mind the possibility of spending a second winter within the Arctic circle; and this comfort could only, therefore, be allowed on a few occasions, during the most severe part of the winter.

In the course of Capt. Parry's examination of the lower deck, he had always an opportunity of seeing those few men who were on the sick list, and of receiving from Mr Edwards a report of their respective cases; as also of consulting that gentleman as to the means of improving the warmth, ventilation, and general comfort of the inhabited parts of the ship. Having performed this duty, he returned to the upper deck, where he personally inspected the men; after which they were sent out to walk on shore, when the weather would permit, till noon, when they returned on board to their dinner. When the day was too inclement for them to take this exercise, they were ordered to run round and round the deck, keeping step to the tune of an organ, or, not unfrequently, to a song of

their own singing. Among the men were a few who did not at first quite like this systematic mode of taking exercise ; but when they found that no plea, except that of illness, was admitted as an excuse, they not only willingly and cheerfully complied, but made it the occasion of much humor and frolic among themselves.

CHAPTER X.

Scenery of Winter Harbour.—Optical Deception.—Employments of Officers and Men.—Theatrical Entertainments.—Night and Day.

THE officers, who dined at two o'clock, were also in the habit of occupying one or two hours in the middle of the day in rambling on shore, even in the darkest period, except when a fresh wind and a heavy snow-drift confined them within the housing of the ships. It may well be imagined that at this period, there was but little to be met with in their walks on shore, which could either amuse or interest. The necessity of not exceeding the limited distance of one or two miles, lest a snow-drift, which often rises very suddenly, should prevent return, added considerably to the dull and tedious monotony which, day after day, presented itself. To the southward was the sea, covered with one unbroken surface of ice, uniform in its dazzling whiteness, except that, in some parts, a few hummocks were seen thrown up somewhat above the general level. Nor did the land offer much greater variety, being almost entirely covered with snow,

except here and there a brown patch of bare ground in some exposed situations, where the wind had not allowed the snow to remain. When viewed from the summit of the neighbouring hills, on one of those calm and clear days, which not unfrequently occurred during the winter, the scene was such as to induce contemplations which had, perhaps, more of melancholy than of any other feeling. Not an object was to be seen on which the eye could long rest with pleasure, unless when directed to the spot where the ships lay, and where the little colony was planted. The smoke which there issued from the several fires, affording a certain indication of the presence of man, gave a partial cheerfulness to this part of the prospect; and the sound of voices, which, during the cold weather, could be heard at a much greater distance than usual, served now and then to break the silence which reigned around; a silence far different from that peaceable composure which characterises the landscape of a cultivated country: it was the death-like stillness of the most dreary desolation, and the total absence of animated existence. Such, indeed, was the want of objects to afford relief to the eye or amusement to the mind, that a stone of more than usual size appearing above the snow, in the direction in which they might be going, immediately became a mark, on which their eyes were unconsciously fixed, and towards which they mechanically advanced.

Dreary as such a scene must necessarily be, it could not, however, be said to be wholly wanting

in interest, especially when associated in the mind with the peculiarity of their situation, the object which had brought them hither, and the hopes which the least sanguine among them sometimes entertained, of spending a part of the next winter in the more genial climate of the South-Sea Islands. Perhaps, too, though none then ventured to confess it, their thoughts would sometimes involuntarily wander homewards, and institute a comparison between the rugged face of nature in this desolate region, and the livelier aspect of the happy land which they had left behind.

They had frequent occasion, in their walks on shore, to mark the deception which takes place in estimating the distance and magnitude of objects, when viewed over an unvaried surface of snow. It was not uncommon for them to direct their steps towards what they took to be a large mass of stone, at the distance of half a mile, but which they were able to take up in their hands after one minute's walk. This was more particularly the case, when ascending the brow of a hill; nor did they find that the deception became less, on account of the frequency with which they experienced its effects.

In the afternoon, the men were usually occupied in drawing and knotting yarns, and in making points and gaskets; a never-failing resource, where mere occupation is required, and which it was necessary to perform entirely on the lower deck, the yarns becoming so hard and brittle, when exposed on deck to the temperature of the atmosphere, as to

be too stiff for working, and very easily broken. We may in this place remark that the lower rigging became extremely slack during the severity of the winter, and gradually tightened again as the spring returned; effects the very reverse of those which had been anticipated, and which can only be accounted for by the extreme dryness of the atmosphere in the middle of winter, and the subsequent increase of moisture.

At half past five in the evening, the decks were cleared up, and at six they again beat to divisions, when the same examination of the men and of their births and bed-places took place as in the morning; the people then went to their supper, and the officers to tea. After this time the men were permitted to amuse themselves as they pleased, and games of various kinds, as well as dancing and singing occasionally, went on upon the lower deck till nine o'clock, when they went to bed, and their lights were extinguished. In order to guard against accidents by fire, where so many fires and lights were necessarily in use, the quarter-masters visited the lower deck every half hour during the night, and made their report to the officers of the watches that all was, in this respect, safe below; and to secure a ready supply of water in case of fire, a hole was cut twice a day in the ice, close alongside each ship. It is scarcely necessary to add, that the evening occupations of the officers were of a more rational kind than those which engaged the attention of the men. Of these, reading and writing were the principal employments, to which were

occasionally added a game of chess, or a tune on the flute or violin, till half-past ten, about which time they all retired to rest.

Such were the employments which usually occupied them for six days in the week, with such exceptions only as circumstances at the time suggested. On Sundays, divine service was invariably performed, and a sermon was read on board both ships; the prayer appointed to be daily used at sea, being altered, so as to adapt it to the service in which they were engaged, the success which had hitherto attended their efforts, and the peculiar circumstances under which they were placed. The attention paid by the men to the observance of their religious duties, was such as to reflect upon them the highest credit, and tended in no small degree to the preservation of that regularity and good conduct, for which, with very few exceptions, they were invariably distinguished.

Theatrical entertainments took place regularly once a fortnight, and continued to prove a source of infinite amusement to the men. The stock of plays was so scanty, consisting only of one or two volumes, which happened accidentally to be on board, that it was with difficulty they could find the means of varying the performances sufficiently. The writers, therefore, set to work, and produced, as a Christmas piece, a musical entertainment, expressly adapted to the audience, and having such a reference to the service on which they were engaged, and the success they had so far experienced, as at once to afford a high degree of present recrea-

tion, and to stimulate, if possible, the sanguine hopes which were entertained by all on board, of the complete accomplishment of the enterprise. They were at one time apprehensive, that the severity of the weather would have prevented the continuance of this amusement, but the perseverance of the officers overcame every difficulty ; and, perhaps, for the first time since theatrical entertainments were devised, more than one or two plays were performed, with the thermometer below zero on the stage, on board the *Hecla*.

The *North Georgia Gazette*, which we have already mentioned, was a source of great amusement, not only to the contributors, but to those who, from diffidence of their own talents, or other reasons, could not be prevailed on to add their mite to the little stock of literary composition, which was weekly demanded ; for those who declined to write were not unwilling to read, and more ready to criticise than those who wielded the pen ; but it was that good-humored sort of criticism that could not give offence. The subjects handled in this paper were, of course, various, but generally applicable to their own situation. Of its merits or defects it will not be necessary to say anything here. The officers, who were chiefly concerned in carrying it on, agreed to print it for the entertainment of their friends ; the publisher being at liberty, after supplying each with a certain number of copies, to dispose of the rest.

The return of each successive day had been always very decidedly marked by a considerable

twilight for some time about noon ; that on the shortest day being sufficient to enable them to walk out very comfortably for nearly two hours. There was, usually, in clear weather, a beautiful arch of bright red light, overspreading the southern horizon for an hour or two before and after noon ; the light increasing, of course, in strength, as the sun approached the meridian. Short as the day now was, if indeed any part of the twentyfour hours could properly be called by that name, the reflection of light from the snow, aided occasionally by a bright moon, was at all times sufficient to prevent experiencing, even under the most unfavorable circumstances, anything like the gloomy night which occurs in more temperate climates. Especial care was taken, during the time the sun was below the horizon, to preserve the strictest regularity in the time of meals, and in the various occupations which engaged the men's attention during the day ; and this, together with the gradual and imperceptible manner in which the days had shortened, prevented this kind of life, so novel in reality, from appearing very inconvenient, or indeed like anything out of the common way. They were not sorry, however, to have arrived without any serious suffering, at the shortest day ; and they watched with no ordinary degree of pleasure, the slow approach of the returning sun.

CHAPTER XI.

Christmas.—Scurvy breaks out on board the Hecla.—Extreme Cold.—The Sun seen.—Conflagration on Shore.—Extraordinary Accumulation of Vapor.—Sudden Change of Weather.

ON Christmas-day the weather was raw and cold, with a considerable snow-drift, though the wind was only moderate from the N. W.; but the snow which falls during the severe winter of this climate is composed of spiculæ so extremely minute, that it requires very little wind to raise and carry it along. To mark the day in the best manner which circumstances would permit, divine service was performed on board the ships; and Capt. Parry directed a small increase in the men's usual proportion of fresh meat as a Christmas-dinner, as well as an additional allowance of grog, to drink the health of their friends in England. The officers also met at a social and friendly dinner, and the day passed with much of the same kind of festivity by which it is usually distinguished at home; and, to the credit of the men be it spoken, without any of that disorder by which it is too often observed by seamen. A piece of English roast-beef, which formed part of the officers' dinner, had been on board since the preceding May, and preserved without salt during that period, merely by the antiseptic properties of a cold atmosphere.

A great many frost-bites occurred about this time [Dec. 30], principally in the men's feet, even when

they had been walking quickly on shore for exercise. On examining their boots, Mr Edwards remarked, that the stiffness of the thick leather, of which they were made, was such as to cramp the feet, and prevent the circulation from going on freely, and that this alone was sufficient to account for their feet having been frost-bitten. Being very desirous of avoiding these accidents, which, from the increased sluggishness with which the sores healed, were more and more likely to affect the general health of the patients by long confinement, Capt. Parry directed a pair of canvass boots, lined with blanketing, or some other woollen stuff, to be made for each man, using raw hide as soles; this completely answered the desired purpose, as scarcely any frost-bites in the feet afterwards occurred, except under circumstances of very severe exposure.

The preceding accounts of the manner in which the time was employed, and of the occupations of the ships' companies, are taken, at length, from the journal of Capt. Parry, and given almost in his own words. We deem it unnecessary to make any addition. If what has been related does not confer honor on officers and men, and prove them eminently qualified for the service they had undertaken, we have formed a very erroneous judgment.

On the first of January scurvy made its appearance among them. Mr Scallon, gunner of the *Hecla*, had complained for some days, and the symptoms were now decidedly scorbutic. It was found to be owing to the dampness of his bedding, and proper measures were taken to prevent an increase of the malady. By raising mustard and

cross in small boxes near the cabin stove, they were able to give Mr Scallon and one or two more patients nearly an ounce of salad per day. The vegetables thus raised were necessarily colorless from the privation of light ; but they had the same taste as if raised in ordinary circumstances. So effectual were they in the case of Mr Scallon, that he recovered in less than a fortnight.

On the morning of the 7th of January the thermometer fell to -40° , and at noon the mercury sunk to -49° . Nevertheless, the weather being quite calm, the people walked on shore for an hour without suffering any inconvenience, the sensation of cold depending more on the wind than the temperature. Our own observations go to confirm those of Capt. Parry in this particular. We have seen persons, properly clothed, go abroad while the thermometer was at upwards of 30° below zero, without feeling pain, or any disagreeable sensation. A wind, though the temperature may be fifty degrees higher, is ten-fold more inconvenient and dangerous. We have experienced in our own person, as well as observed in others, that the animal heat is always sufficient to resist any natural degree of cold, while the weather is calm.

Toward the end of the month they began to look out for the sun from the mast head. On the morning of the third of February, the weather being clear, a cross, consisting of the usual vertical and horizontal rays, was seen about the moon. At twenty minutes before noon, the sun was seen from the Hecla's maintop, at the height of fiftyone feet

above the sea, being the first time it had been seen for eightyfour days, twelve days less than its actual stay below the horizon. There was now, from eight o'clock till four, sufficient light for any kind of work, and on the seventh they began to collect ballast for the *Hecla*, to make up for the expenditure of stores.

The coldest part of the year was now approaching; yet the sun had sufficient power to affect the thermometer, which rose from -40° to -35° when exposed to its rays. The distance at which sounds were heard in the open air during the continuance of this intense cold was truly surprising. Conversation carried on a mile off could be distinctly heard. The smoke from the ships, too, owing to the difficulty it has to rise in a low temperature, was carried horizontally to a great distance. On the 15th, the mercury sunk to 55° below zero, which was the most intense degree of cold observed during the winter. Mercury was malleable in this state of the atmosphere.

At half past ten, A. M. on the twentyfourth, the house on shore was discovered to be on fire. The flames were extinguished by the men in a few minutes, but at the expense of having their cheeks and noses frost-bitten, so that sixteen were added to the sick list. One of them, from holding a compass he had saved in his bare hands, froze them so badly that it was necessary to amputate four fingers from one, and three from the other. Nor did the weather permit them to dig out the things which had been buried in the ruins of the house

till the first of March. On this day it had so far moderated as to allow them to enjoy a walk on the hills, and on the 6th the thermometer rose to zero, a higher temperature than any that had been registered since the 17th of December. On the seventh a quantity of snow, placed in a very favorable situation, thawed, and the people took advantage of the change to rebuild the house on shore.

The severe weather had kept all the vapor, which had accumulated and frozen to the ship's sides, below deck in a solid state, till now. But the mildness of the weather having caused a thaw below, it became necessary to scrape off the coating of ice. In one day, incredible though it may seem, no less than a hundred buckets full were removed, each containing from five to six gallons; the accumulation of less than four weeks! It may be observed that this vapor was produced, principally by the men's breaths, and by the steam of their food during meals, that from the coppers being effectually carried on deck by the apparatus provided for that purpose.

From this time the temperature gradually rose. The last use of the theatre was made by performing The Mayor of Garratt, and a part of the ship's roofings was removed to admit the light. On the 20th, two gulls were seen, and on the twentythird, by digging a hole in the centre of the harbour, it was found that the ice had acquired a thickness of six feet and an half during the winter. It was hard and brittle till within a foot of the lower surface, where it was soft and spongy. The length of the

days had so much increased by the twentysixth, that a very sensible twilight was visible in the north, and the weather was now warm enough to allow wet silk to dry on deck.

For the last three or four days of April, the snow on the black cloth of the housing had begun to thaw a little during a few hours in the middle of the day, and on the 30th so rapid a change took place in the temperature of the atmosphere, that the thermometer stood at the freezing, or, as it may more properly be termed in this climate, the thawing point, being the first time that such an event had occurred for nearly eight months, or since the 9th of the preceding September. This temperature was so much like that of summer, that Capt. Parry was under the necessity of using his authority to prevent the men from making such an alteration in their clothing as might have been attended with very dangerous consequences. The thermometer had ranged from -32° to $+32^{\circ}$ in the course of twenty days. There was, at this period, more snow upon the ground than at any other time of the year, the average depth on the lower part of the land being four or five inches, but much less upon the hills; while in the ravines a very large quantity had been collected. The snow at this time became so soft, from the influence of the sun upon it, as to make walking very laborious and unpleasant.

This rapid change in the weather revived their hopes of a speedy departure from Melville Island, and they all had sanguine expectations of leaving their winter-quarters before July.

CHAPTER XII.

Return of the Migratory Animals to Melville Island.—Snow Blindness.—
The Hecla freed from the Ice.—Gardening.—Journey to explore Melville Island.

ON the 1st of May, however, it blew a gale from the northward, and the sun was seen at midnight for the first time that season. The storm continued all the next day, and the snow fell so deep as to bury the house on shore completely. On the 6th, the people began the operation of cutting the ships out of the harbor. In order to prevent the men from suffering from wet and cold feet, a pair of boots and stockings were given to each, being part of a complete suit which had been supplied, to be issued to the ships' companies gratis, should occasion require. And as the expedition had been victualled for two years only, one of which had now expired, Capt. Parry thought it proper to reduce the daily rations to two thirds of the established proportion, to which reduction both officers and men cheerfully submitted.

On the 12th, one of the men reported that he had seen a ptarmigan, which was hailed as a sure omen of returning summer. The next day one was killed; and, in a day or two more, the tracks of reindeer and musk-oxen were discovered; indicating that these animals had commenced their journey to the north. The time of their return to

Melville Island was thus ascertained, and it was suggested that the time of their migration had occurred with the first fine weather after the commencement of constant day-light. As it was important that all the game they might procure should be served out in lieu of the ordinary stores, it was ordered that all game killed should be public property, and as such should be issued like any other provision.

Some of the men were now afflicted with a disease common in all the northern desert parts of America. This is a painful inflammation of the eyes, supposed to be occasioned by the reflection of intense light from the snow, aided by the heat of the sun. The sensation resembles that of sand in the eyes, and we have seen it in some instances result in a total and permanent loss of sight. As a preventive of this complaint, a piece of black crape, to be worn as a veil, was given to each man, and was found to be very serviceable. This fashion is in vogue all over the northwest.

On the 17th, the operation of cutting the ice round the Hecla was completed, in the following manner: the ice alongside the ships was found to be six feet thick, and they began by digging a large hole under the stern in order to enter the saw. This occupied two days, as few could work at it at once; but in the mean time all the snow and rubbish was cleared away from the ship's side, leaving only the solid ice to work upon. A trench, two feet wide, was cut the whole length of the starboard side, from the stem to the rudder, keeping within an inch

or two of the bends, and taking care here and there to leave a dike, to prevent the water which might ooze into one part from filling up the others in which the men were working. In this manner was the trench cut with axes, to the depth of about four feet and a half, leaving only eighteen inches for the saws to cut, except in those places where the dikes remained. The saw, being then entered in the hole under the stern, was worked in the usual manner, being suspended by a triangle made of three spars; one cut being made on the outer part of the trench, and a second within an inch or two of the bends, in order to avoid injuring the planks. A small portion of ice being broken off now and then by bars, handspikes, and ice-chisels, floated to the surface, and was hooked out by piecemeal. This operation was a cold and tedious one, and required nine days to complete it. When the workmen had this morning completed the trench within ten or twelve feet of the stern, the ship suddenly disengaged herself from the ice, to which she had before been firmly adhering on the larboard side, and rose in the water about ten inches abaft, and nearly eighteen inches forward, with a considerable surge. This disengagement, to which the sailors naturally applied the term 'launching,' confirmed the supposition, that the ship was held so fast by the ice, as to make it dangerous to alter materially the stowage of the holds, but in a manner the very reverse of what had been apprehended. This circumstance, however, on consideration, it was not difficult to explain. In the

course of the winter, the strong eddy winds about the ships had formed round them a drift of snow, seven or eight feet deep in some parts, and, perhaps, weighing a hundred tons; by which the ice, and the ships with it, were carried down much below the natural level at which they would otherwise have floated. In the mean time the ships had become considerably lighter, from the expenditure of several months' provisions; so that, on both these accounts, they had naturally a tendency to rise in the water as soon as they were set at liberty.

The ships being once more afloat, a strict survey was held on all the provisions and stores, and the lading was properly adjusted. In the mean time a party were engaged in breaking stones for ballast, and the other necessary works went on with great activity. It was found requisite to caulk the upper works of both ships, the frost having opened the seams very much. At the same time, Capt. Parry laid out a small garden, and planted it with antiscorbutic plants; but the attempt failed utterly, so that their farming was necessarily confined to the cabin, where mustard and cress could be raised without difficulty. Peas, however, grew on the shore, big enough to have been eaten as greens, if they had been sowed in abundance.

On the twentyfirst, some of the officers took a walk inland, and were able to fill a pint bottle with water from a pool of melted snow, which was the first they had seen; a proof of the extreme severity of the climate. They also discovered roots of

wild sorrel growing in plenty ; but it had not yet begun to vegetate.

On the 24th, the clouds seemed to bode rain, and in the evening several showers fell, making numerous little pools upon the ice, which now remained unfrozen twelve or fourteen hours every day, as did also the sea water round the ships. Gulls too were seen.

Thinking, very justly, that an examination of the interior of the island would be conducive to the improvement of the geography and natural history of these regions, and the health of the seamen allowing a number to be spared from each ship, Capt. Parry determined on an excursion. A cart was constructed to convey the tents and baggage, which answered the purpose very well ; and on the first of June the Captain set off with a party of twelve volunteers, and a supply of provisions for three weeks. They were furnished with two tents and a small quantity of fuel for the purpose of cookery, and each carried a blanket and a few spare articles of clothing.

The course of the party was directly north. They found those parts where the snow had disappeared more productive than the vicinity of Winter Harbour ; the dwarf willow, sorrel and poppy being more abundant, and the moss more luxuriant. After proceeding some miles inland, they came to an extensive plain, covered with snow, and terminated by a chain of lofty hills. This plain they judged to be three or four hundred feet above the level of the sea. They travelled slowly northward for six

days, before they reached the north shore of the island. They found the earth covered with snow quite across, excepting in a few exposed spots, and the only animals they saw were reindeer.

From the northern coast a high island was seen, which was named after Captain Sabine. Having thus ascertained the extent of Melville Island, the party directed their course westward. As they proceeded alongshore in this direction, they found the soil richer, and vegetation more abundant. Many species of birds were seen, and musk-oxen were observed, as well as reindeer. The tracks of mice, hares, wolves, and foxes were abundant, and the sites of six Esquimaux tents were also discovered. They consisted of rude circles of stones, of all sizes and shapes, raised two feet from the ground: they were paved with large slabs of sandstone, which is very abundant on Melville Island. They appeared not to have been occupied for several years, for a thick coat of moss had grown upon the stones. In each of the huts was a separate compartment, forming a recess projecting outward; and at a few feet from one of them was a smaller circle of stones, which had probably been a fire-place; for the marks of fire were distinctly visible. The huts that Capt. Parry had previously seen, in this and the former voyage, had each one of these small circles attached. Thus it would seem that no part of the northern regions is too cold and inhospitable to preclude the visits of the Esquimaux, though it may be doubted whether they ever abide permanently on Melville Island or the surrounding lands.

On the 14th, the party reached Winter Harbour. The results of the expedition were, that the extent and geographical features of this island were ascertained, as well as its capacity to sustain animal and vegetable life. Several bays and capes were also discovered, to which names were given, as usual.

CHAPTER XIII.

Progress of the Season.—State of the Ice.—Damage received by the Rudders of the Ships.

THE equipment of the ships had gone on satisfactorily during Capt. Parry's absence—both vessels being nearly ready for sea. The survey of the provisions and stores was completed, and the whole were found in as good order as when they left England, with the exception only of a small quantity of bread and sugar, which was not, however, so far damaged as to be unfit to be eaten. This high state of preservation must undoubtedly be attributed to the antiseptic qualities of a cold climate, which is unfavorable to the process of putrefaction, and to the generation of vermin,—and to the care which had been taken to supply the ships with articles of the best quality, packed in the best possible manner. As to vermin, neither mouse, rat, or maggot, was seen on board during the voyage.

A perceptible change had now taken place in the ice. The upper surface was covered with in-

numerable pools of brackish water, so that the liberation of the sea might be daily expected. Being desirous of obtaining as much game as possible during the remainder of the time that must be passed in Winter Harbour, Capt. Parry sent out hunting parties to remain ten or twelve miles inland, with orders to send whatever game they might procure to the ships, and also to observe the ice from the hill tops, and report any change that might take place. Sorrel being now far enough advanced to be eaten, two afternoons in each week were ordered to be set apart for the purpose of collecting it, and each man was required to bring in one ounce, to be served out in lieu of lemon juice, pickles, &c. From this time the growth of the sorrel was so rapid that a man could easily pick nearly a pound of this valuable antiscorbutic, of which all were very fond. The leaves were eaten in various ways, such as pickles, salad—in puddings, or boiled in the manner of greens; in all of which modes it was always used, when it could be procured.

On the eighteenth, the first reindeer killed this season was brought in, and a second followed on the 19th. They were very lean, not more than sixty pounds of flesh being found on either of them. By the 20th the land in the neighbourhood of the ships was covered with the purple flowers of the *saxifraga oppositifolia*. The ravines, with which the surface of the whole island is intersected, were now discharging torrents of melted snow into the sea; but still the ice held on.

The suddenness of the changes of the climate was strikingly exemplified by this circumstance ; for not more than a fortnight before they had been under the necessity of thawing the snow when they wanted water to drink.

Aquatic fowls made their appearance, and more reindeer were killed. The horns of the males were in the velvet, that is, covered with a soft, downy skin. The horns themselves were soft, and near the tips flexible and easily broken. Foxes also were seen, and the bones of whales were found on shore at a considerable distance from the sea, whither they had probably been carried by the Esquimaux. The dissolution of the ice continued daily, and on the 22d, it was observed to be in motion in the offing, setting to the eastward at the rate of a mile an hour.

On the 27th, one of the men, by name Scott, who had long been afflicted with scurvy, died. A *post mortem* examination proved his disease to have been such as would have baffled the utmost skill and attention, in any climate, or under any circumstances. For the last two or three days, the spring-tides, which had been unusually high, overflowed the ice near the beach, so as to make it difficult to land near high water. In the general appearance of the ice in the harbour, there was no perceptible alteration from day to day, though the thawing process was going on with great rapidity. The officer in command of the hunting party to the southwest, received strict injunctions to watch the ice constantly, and to make an immediate report of any

appearance of open water in any direction. For the last four or five days in June, they had experienced more southerly wind than usual, the weather being generally cloudy, with much small rain, and now and then a little snow; the general temperature of the atmosphere, however, was pleasant and comfortable to the feelings, as well as favorable to the dissolution of the ice, for which they were so anxiously looking.

One of Mr Nias's party arrived from the eastward on the morning of the 1st of July, with a good supply of hares, ducks, and ptarmigans. He had seen above fifty deer in three days, but they were too wild to allow the party to get near them, in a country without the smallest cover of any kind.

A herd of fourteen deer being seen near the ships, a party was despatched in pursuit of them, with the customary want of success, it being almost impossible to approach them in so open and exposed a country, so that these excursions generally ended in a chase between the men and the deer; some good dogs would, perhaps, have been serviceable on these occasions.

Having taken on board the bower anchors and cables from the beach, on account of the difficulty they should have found in removing them after the ice began to break up, each ship placed two stream anchors on shore with hawsers from the bow and quarter, to hold them in case of any sudden motion of the ice, the pools upon which now increased very perceptibly both in depth and extent from day to day. In looking into these pools, it always ap-

peared, during the day, as if drops of rain were falling into them; this was caused by the continual extrication of air from the ice which was thawing below, and by the rising of the bubbles to the surface. At six, P. M. the atmosphere being clear and serene, the thermometer rose to 53° in the shade, but immediately on a moderate breeze springing up from the northward it fell to 45° . On the 5th and 6th, however, it stood for three hours from 50° to 52° , with a fresh breeze from the northward, accompanied by cloudy weather; and on the afternoons of the two following days, the wind being still northerly, the atmosphere continued for some time at the temperature of 55° .

The dissolution of the ice of the harbour went on so rapidly in the early part of July, that they were greatly surprised, on the 6th, in finding, that in several of the pools of water, on its upper surface, holes were washed quite through to the sea beneath. On examining several of these, it was found that the average thickness of the ice, in the upper part of the harbour, where the ships were lying, did not exceed two feet, which was much less than they had any idea of. Towards the mouth of the harbour, however, where the water was deeper, no such holes made their appearance for some days after this. It must here be remarked, that in all cases they found the ice to be first thawed and broken up in the shoalest water, in consequence, perhaps, of the greater facility with which the ground, at a small depth below the surface of the sea, absorbed and radiated the heat of the sun's

rays; and, as it is in such situations that water generally freezes first, this circumstance seems a remarkable instance of the provision of nature for maintaining such a balance in the quantity of ice annually formed and dissolved, as shall prevent any undue or extraordinary accumulation of it in any part of the polar regions of the earth. In consequence of this circumstance, they were now enabled, for the first time, to bring the boats down to the beach, so as to allow them to float at high water, in order to prevent their being split by the sun, while in every other part of the harbour, except thus near the shore, they had not the means of doing so till some days afterwards.

On unhooking the rudders, and hauling them up on the ice for examination, they were found a good deal shaken and grazed by the blows they had received during the time the ships were beset at the entrance of Davis' Strait. It was found, also, that the rudder-cases in both ships had been fitted too small, occasioning considerable difficulty in getting the rudders down when working—a circumstance by no means disadvantageous, (perhaps, indeed, rather the contrary,) on ordinary service at sea, but which should be carefully avoided in ships intended for the navigation among ice, as it is frequently necessary to unship the rudder at a short notice, in order to preserve it from injury, as future experience was soon to teach them. This fault was, however, soon remedied, and the rudders again hung, in readiness for sea. About this time, a few flocks of loons occasionally made their ap-

pearance, invariably flying quite round the harbour, exactly over the narrow and only strip of water next the beach, as if looking out for food.

CHAPTER XIV.

A Boat passes between the Ships and the Shore.—Maximum Heat at Melville Island.—The Vessels are made ready for Departure.—They weigh Anchor.—Departure from Winter Harbour.—Are stopped by the Ice.—Description of a Part of the Shore.

ON the 14th of the month, a boat passed, for the first time, between the ships and the shore, in consequence of the junction of a number of the pools and holes in the ice; and on the following day the same kind of communication was practicable between the ships. It became necessary, therefore, to provide against the possibility of the ships being forced on shore by the total disruption of the ice between them and the beach, and the pressure of that without, by letting go a bower-anchor underfoot, which was accordingly done as soon as there was a hole in the ice under the bows of each, sufficiently large to allow the anchors to pass through. They had now been quite ready for sea for some days; and a regular and anxious look-out was kept from the crow's nest for any alteration in the state of the ice, which might favor a departure from Winter Harbour, in which it now became more than probable that they were destined to be detained thus inactive for a part of each month in the whole year, as

they had reached it in the latter part of September, and were likely to be prevented from leaving it till after the commencement of August.

From six, A. M. till six, P. M. on the 17th, the thermometer stood generally from 55° to 60° ; the latter temperature being the highest which appears in the Hecla's Meteorological Journal during this summer. It will readily be conceived how pleasant such a temperature must have been to their feelings after the severe winter which immediately preceded it. The month of July is, indeed, the only one which can be called at all comfortable in the climate of Melville Island.

On the eighteenth, Capt. Parry rowed round the harbour in a boat, and took the soundings wherever the ice would permit. The channel was daily becoming wider, especially after a breeze from any quarter, causing a ripple on the sea, by which the edge of the ice was rapidly washed away. On the 20th, a strong breeze from the N. N. E. together with a fog and rain, all favorable to the dispersion of the ice, removed that part of it immediately round the Hecla from which she had been artificially detached so long before, so that the ship was once more riding at anchor. The Griper had previously been set free in the same manner. Yet the ice still occupied the whole centre of the harbour, and it was only where the ships were lying that it had separated at so great a distance from the shore; occasioned, probably, by the radiation of heat from the vessel and from the various articles which had been deposited upon the ice around them.

Thus they continued for some days longer. The ice in the harbour became detached from the shore at every point, but a quantity forced up upon a reef to the south, by the pressure of the external ice, proved that it had some room in which to acquire motion. On the 24th, Capt. Parry ordered the sails to be bent, in readiness to start at a moment's warning; rather with a view to encourage the men, than with any prospect of departure; for it could not be concealed that in eight or nine weeks more, the navigable season would arrive at its conclusion.

On the morning of the 26th, there being a space of clear water for three quarters of a mile to the southward, they took advantage of a northern breeze to run as far as the opening would permit, and then dropped anchor at the edge of the ice, intending to advance step by step as it separated. The ice across the entrance of the harbour in this spot, as well as that in the offing, appeared from the crow's nest quite continuous and unbroken, with the same appearance of solidity as at midwinter.

On the 30th, the whole body of the ice was in motion toward the southeast, breaking away, for the first time, from the points at the entrance of the harbour. This rendering it probable that the ships would soon be released, Capt. Parry furnished Lieut. Liddon with instructions for his guidance during the coming season of operations, and appointed places of rendezvous in case of separation.

On the first of August, the harbour was clear of

ice, and there appeared to be water in the direction of their intended course. At one, P. M. everything having been brought on board, they weighed anchor and ran out of Winter Harbour, in which they had passed ten entire months of the year, and a part of the two remaining ones, September and August.

In running along at the distance of half a mile from the land, they were pleased to see that the coast to the westward was more clear of ice than it had been when they arrived the preceding year, a month later; the main ice being blown away by the late winds to the distance of four or five miles from the shore. The navigable channel between the ice and the land was from one to two and a half miles wide, and seemed from the mast head to continue as far as the eye could reach to the westward.

After a few tacks, they had the mortification to perceive that the Griper sailed much worse than before, though great pains had been taken during her re-equipment to improve her qualities. By midnight the Hecla had gained eight miles to windward of her, and was obliged to heave to, to avoid parting company.

A southerly wind springing up the next day, made it probable that the ice would close in upon the ships, and they therefore began to look out for a situation where they might be secured in-shore, behind some of the heavy grounded ice. At one o'clock they perceived that a heavy floe had already closed completely in with the land at a point

a little to the westward of them. A proper place having been found for their purpose, the ships were hauled in and secured, the Griper's bow resting on the beach, in order to allow the Hecla to lie in security without her. This place was so completely sheltered from the accession of the main ice, that Capt. Parry began to think of taking the Griper's crew on board the Hecla, and pursuing the voyage in that ship alone.

Shortly after anchoring, the Griper's people heard the growling of a bear among the ice near them, but the animal did not appear. This was the only instance of meeting with a bear during their stay at Melville Island, excepting the one that followed a man to the ships, immediately after their arrival, as before mentioned.

No alteration in the position of the ice took place on the 3d, but at one, A. M. on the 4th, the loose ice drifted in upon them, the wind having veered to the north. Soon after, a floe, of not less than five miles in length, and a mile and a half across, was found to be approaching the shore, at a quick rate. The ships were immediately hauled as near the shore as possible, and preparation made for unshipping the rudders, if necessary. The floe was brought up, however, by the masses of ice aground outside, with which it successively came in contact, and the ships remained in perfect security; the floe, as usual after the first violence is over, moved off again to a little distance from the shore. The meridian altitude of the sun gave the latitude of

this station $74^{\circ} 36' 06''$, and the longitude, by the chronometers, was $111^{\circ} 16' 39''$.

At noon, the heavy floe at the point near the ships began to quit the land, and at half-past one, P. M., there being a narrow passage between them, the breadth of which the breeze was constantly increasing, they cast off and stretched to the westward. The channel, which opened as they proceeded, varied in its general breadth from one to two miles; in some places it was not more than half a mile. The soundings were very regular, and sufficiently deep close to the shore; in one place they found twentythree fathoms at one hundred yards from the beach, in another, fourteen, at sixty or seventy yards. At seven, P. M., they passed the place where they had been detained so long the preceding September, and where a party had been lost. The wind was variable, but they made considerable progress along the land to the southwest. At eleven, P. M., they had got just far enough to see that there was a free and open channel beyond the westernmost visible point of Melville Island, when the wind fell, and prevented them from taking advantage of it.

They had this evening occasion to observe once more that darkness in the horizon to the southward, which had been noticed from this station in 1819, and more frequently since that time, during their detention in Winter Harbour, as bearing a great resemblance to the loom of land in that quarter. They were the more inclined to the belief that there was land at no very great distance to the southward,

from the conviction that there must be something which prevented the ice being drifted off the shore of Melville Island, more than five or six miles, with any direction or force of wind.

At one, P. M., the weather continuing quite calm, and being desirous of examining the ice in-shore, that they might be ready for the floes closing upon them, Capt. Parry left the ship, accompanied by Captain Sabine and Mr. Edwards, and landed near one of the numerous deep and broad ravines, with which the whole of this part of the island is indented. All the ice which was here fixed to the ground was literally upon the beach, with very deep water close alongside of it, and none of the masses projected to a sufficient distance from the shore to afford the smallest shelter to the ships in case of accidents. They saw several white hares here, and on this and many subsequent occasions found them frequent the sides of the high banks which face the south, and where there is usually a plentiful vegetation for them to feed upon. They were ascending the hill, which was found by trigonometrical measurement to be eight hundred and fortyseven feet above the level of the sea, and on which they found no mineral production but sand-stone and clay iron-stone, when a breeze sprung up from the eastward, bringing up the Griper, which had been left several miles astern. They only stopped, therefore, to obtain observations for the longitude and the variation of the magnetic needle; the former of which was $112^{\circ} 58' 32''$, and the latter $110^{\circ} 56' 11''$ easterly, and then imme-

diately returned on board, and made all sail to the westward. After running for two hours without obstruction, they were once more mortified in perceiving that the ice, in very extensive and unusually heavy floes, closed in with the land a little to the westward, and the channel of clear water between the ice and the land gradually diminished in breadth till at length it became necessary to take in the studding sails, and to haul to the wind, to look about. Capt. Parry immediately went in a boat to examine the grounded ice off a small point of land, such as always occurs in this region at the outlet of a ravine. He found that this point afforded the only possible shelter in case the ice should close, and therefore took the *Hecla* in, and secured her without loss of time. It was well he did so, for the ice was fast closing upon the shore. The *Griper* was at this time four miles astern, and Lieut. Liddon was directed by signal to secure her in the best manner he could.

CHAPTER XV.

Dangerous Position of the *Hecla*.—Submarine Ice.—Curious Wall.—Danger of the *Griper*.—A Whale seen.—Discovery of Banks's Land.—Detention by the Ice.—A Musk-Ox killed.—The Ice closes on the Shore.

AT the time of making the *Hecla* fast, a current was setting to the westward, at the rate of a mile and a half an hour, with a strong eddy running into the bight where the ships lay; at ten, P. M. it took

a sudden turn, all the loose ice near, running past the ship out of the bight, and the floes outside beginning to set to the eastward, and towards the land withal. They, therefore, hauled the ship still more into the bight formed by the point, getting her into four fathoms abaft and six forward, and abreast a part of the beach where there was not quite so much heavy ice within to endanger the ship being crushed. This was done from a belief that, if the floes came in, the ship must inevitably be 'nipped,' and in this case it was better to be lying in six fathoms than nine; besides, the masses of ice now inside, not being so large as the rest, might possibly be forced up on the shore before the ship, instead of offering so great a resistance as to expose her to all the force of the squeeze. On the whole of this steep coast, wherever they approached the shore, they found a thick stratum of blue and solid ice, firmly embedded in the beach, at the depth of from six to ten feet under the surface of the water. This ice has probably been the lower part of heavy masses forced aground by the pressure of the floes from without, and still adhering to the viscous mud of which the beach is composed, after the upper part has, in course of time, dissolved. Captain Sabine suggested, that the underground ice found in cold countries, might thus have been deposited. The land gains upon the sea, as it is called, in process of time, as it has certainly done here, from the situation in which they found drift-wood and the skeletons of whales; the ice which fixes itself upon the beach is annually covered in part by alluvial

deposit, and thus may a connected stratum of it be buried for ages, several feet below the surface of the earth. From the tops of the hills in this part of Melville Island a continuous line of this submarine ice could be distinctly traced for miles along the coast.

In running along the shore this evening, they noticed near the sea what at a distance had every appearance of a high wall artificially built, and which was the resort of numerous birds. Captain Sabine, being desirous to examine it, as well as to procure some specimens of the birds, set out, as soon as the ship anchored, for that purpose. The wall proved to be composed of sand-stone in horizontal strata from twenty to thirty feet in height, which had been left standing, so as to exhibit its present artificial appearance, by the decomposition of the rock and earth about it. Large flocks of glaucous gulls had chosen this as a secure retreat from the foxes, and every other enemy but man; and when the people first went into the ravine in which it stands, they were so fierce in defence of their young, that it was scarcely safe to approach them till a few shots had been fired.

Besides a number of gulls, Captain Sabine and his party brought with them ten hares, which, together with what had been obtained as they came along the land, furnished a fresh meal for the whole crew. Captain Sabine also brought word from Lieutenant Liddon that the Griper was in a situation exactly similar to that of the Hecla, where 'nipping' appeared unavoidable, if the floes should

come in. The ice, however, remained quiet about the Hecla during the day, even though a strong breeze freshened up from the E.S.E., with continued snow; a circumstance which, while it added to their present security, did not give very flattering hopes that there could be any room for the ice to drift to the westward. In the course of the evening Capt. Parry heard again from the Griper; Lieutenant Liddon informing him that the floes had once come in towards her, so as to lift her two feet out of the water, and then retired without doing any damage.

At eleven, P. M. a narrow lane of water opened near the Griper, extending about three miles to the Southwest; near the Hecla it had also slackened a little, about midnight, but it would have been difficult to have found a 'hole' of water in which a boat could have floated, more than three hundred yards beyond the ship.

On the morning of the 7th, a black whale came up, close to the Hecla, being the first seen since the 22d of August the preceding year, and it therefore received the distinctive appellation of *the* whale. Since leaving Winter Harbour they had here and there seen a solitary seal. Lieut. Beechey was sent to the top of a hill to the westward, to ascertain the state of the ice, and returned at two, P. M. with a large fawn, and the intelligence that he had, at a great distance to the south, perhaps forty or fifty miles off, distinguished three capes very plainly. The sea he reported to be covered

with floes as far as the eye could reach, and the space between them to be so closely filled with broken ice that scarcely a hole of water could be seen.

In the afternoon, a man from each mess was sent on shore to pick sorrel, which was here remarkably fine and large, as well as more acid than any they had lately found. The shelter from the northerly winds, afforded by the high land on this part of the coast, together with its southern aspect, renders the vegetation here, immediately next the sea, much more luxuriant than in most parts of Melville Island which they had visited; and a considerable addition was made to their collection of plants. In the afternoon the ice closed the place which had hitherto been open about the Hecla. Several heavy pieces of floes floated past, not less than fifteen feet thick, but they were fortunately stopped by a point of land. At eleven, P. M., however, a mass of this kind, about an acre in extent, drove in, and gave the ship a considerable 'nip' between itself and the grounded ice, and then passed off to the westward. They were not again disturbed till five, A. M., on the 8th, when another piece of a floe came in, and gave the ship another rub, and then went past, after which the ice continued loose for several hours. Captain Parry now clomb up the hill, and saw the land that Lieut. Beechey had discovered. He called it Banks Land, and it is the farthest west of all the discoveries in the Polar Sea.

From the top of the hill not a hole could be seen in the ice in any direction; and they were compelled

to wait for a change with what patience they might. Several hares were killed, and on the morning of the 9th, a musk-ox came down to graze on the beach, near the ships. A party was despatched in pursuit, and having hemmed him in under the hill, which was too steep for him to ascend, succeeded in killing him. When first brought on board, the inside of this animal, which was a male, smelled very strongly of musk, of which the whole of the meat also tasted, more or less, and especially the heart. It furnished four hundred and twenty-one pounds of beef, which was served to the crews as usual, in lieu of their salt provisions, and was very much relished, notwithstanding the peculiarity of its flavor.* The meat was remarkably fat, and, as it hung up in quarters, looked as fine as any beef in an English market. A small seal, killed by the Griper's people, was also eaten by them; and it was generally allowed to be very tender and palatable, though not very sightly in its appearance, being of a disagreeable red color.

In the morning watch, a breeze sprung up from the westward, which they were always ready to welcome, having found that it invariably served to open the ice, while an easterly wind as constantly made it closer. This was, however, of short duration, being succeeded soon after noon by a light air from the southeast, which brought all the loose

* Some pieces of this meat, which were carried to England, were found to have acquired a much more disagreeable flavor than when first killed, though they had not undergone putrefaction in the slightest degree.

ice in upon them. At half-past three, P.M., a large piece of a very heavy floe came close, and would have given them a 'nip' against the shore, had they not avoided it by heaving the ship a few yards ahead in good time. It was then brought up by the point of land, and remained quiet, half a cable's length astern, there not being room for it to drift farther to the westward between the point and an enormous floe which blocked up the passage to the southward and westward.

At ten, P.M., the whole body of ice, which was then a quarter of a mile off, was found to be drifting in upon the land, and the ship was warped back a little way to the westward, towards that part of the shore, which was most favorable for allowing her to be forced up on the beach. At eleven o'clock, the piece of a floe, which came near in the afternoon, and which had since drifted back a few hundred yards to the eastward, received the pressure of the whole body of ice, as it came in. It split across in various directions, with a considerable crash, and presently after they saw a part, several hundred tons in weight, raised slowly and majestically, as if by the application of a screw, and deposited on another part of the floe from which it had broken, presenting the surface that had split, which was of a fine blue color, and very solid and transparent. The violence with which the ice was coming in being thus broken, it remained quiet during the night, which was calm, with a heavy fall of snow.

CHAPTER XVI.

Average Thickness of the Ice.—Observations on the State of the Ice.—

Farther Detention.—Appearances of this Part of Melville Island.—

Great Peril of the Griper.—The Griper ordered to retrograde.

THE mass of ice which had been lifted up the preceding day being drifted close to them on the morning of the 10th, Lieutenant Beechey was sent to measure its thickness, which proved to be forty-two feet; and, as it was a piece of a regular floe, this measurement may serve to give some idea of the general thickness of the ice in this neighbourhood.

It now became evident, from the combined experience of this and the preceding year, that there was something peculiar about the southwest extremity of Melville Island, which made the icy sea there extremely unfavorable to navigation, and which seemed likely to bid defiance to all their efforts to proceed much farther to the westward in this parallel of latitude. They had arrived off it on the 17th of September, 1819, after long and heavy gales from the northwestward, by which alone the ice is ever opened on this coast, and found it, in unusually heavy and extensive fields, completely closing in with the land, a mile or two to the eastward of where they were now lying. They again arrived here in the early part of August, and though the rest of the navigation had been remarkably

clear for fifty miles between this and Winter Harbour, seeming to afford a presumptive proof that the season was rather a favorable one than otherwise, the same obstruction presented itself as before; nor did there appear, from late experience, a reasonable ground of hope, that any fortuitous circumstance, such as an alteration in winds or currents, was likely to remove the formidable impediments which they had now to encounter. The increased dimensions of the ice hereabouts would not alone have created an insurmountable difficulty in the navigation, but that it was very naturally accompanied by a degree of closeness which seldom or never admitted an open space of clear water of sufficient size for a ship, or even a boat, to sail in. They had been lying near their present station with an easterly wind blowing fresh for thirtysix hours together; and although this was considerably off the land, beyond the western point of the island now in sight, the ice had not, during the whole of that time, moved a single yard from the shore; affording a proof that there was no space in which the ice was at liberty to move to the westward, and offering a single and a striking exception to their former experience.

Under these circumstances, Capt. Parry began to consider whether it would not be advisable, whenever the ice would allow them to move, to sacrifice a few miles of the westing they had already made, and to run along the margin of the floes, in order to endeavour to find an opening leading to the southward, by taking advantage of which they

might be enabled to prosecute the voyage to the westward in a lower latitude. He was the more inclined to make this attempt, from its having long become evident that the navigation of this part of the Polar Sea is only to be performed by watching the occasional openings between the ice and the shore; and that, therefore, a continuity of land is essential, if not absolutely necessary, for this purpose. Such a continuity of land, which was here about to fail, must necessarily be furnished by the northern coast of America, in whatsoever latitude it may be found; and, as a large portion of this short season had already been occupied in fruitless attempts to penetrate farther to the westward in their present parallel, under circumstances of more than ordinary risk to the ships, he determined, whenever the ice should open sufficiently, to put into execution the plan he had proposed.

The westerly wind cleared them by slow degrees of the loose masses of ice about the ship, and in the afternoon the main body went off about three hundred yards, drifting also a little to the eastward. It may always be expected, in icy seas, that a breeze of wind, however light, will set the ice in motion, if there be any room for it to move; in such cases, the smaller pieces of course begin to drift the first, and the heavier ones soon follow, though at a slower rate: almost every separate piece is seen to move with a different velocity, proportioned to its depth under water.

In the evening the ice began to drift to the eastward, and Capt. Parry communicated to Lieut.

Liddon his intention to push on to the westward the instant the sea should become clear enough to allow the ships to make any progress; and, failing in this, to attempt a passage considerably to the southward of their present parallel.

At seven, P. M., the Hecla's rudder was shipped, and the top-gallant yards were crossed, in readiness for moving. But neither this evening nor the next day did the ice suffer them to proceed. The latitude at this station was $74^{\circ} 25' 35''$; the longitude, by chronometers, $113^{\circ} 43' 01''$, and the variation of the needle $106^{\circ} 06' 38''$, easterly; each of these being the mean of several observations, taken on different days. There was nothing in the appearance or productions of this part of the island different from those which had been found elsewhere, except that the ravines were more strikingly grand and picturesque, in consequence of the greater height of the land upon this part of the coast. This, as has been before remarked, was found, in one instance, to exceed eight hundred feet above the level of the sea; and the hills, immediately at the back of this, at the distance of nine or ten miles, appeared to be at least one or two hundred feet higher; so that the extreme height of Melville Island, as far as they had an opportunity of seeing it, may, perhaps, be fairly estimated at about one thousand feet. The rocks consisted entirely of sand-stone in horizontal strata, and the soil of sand, intermixed occasionally with decayed plants, forming here and there a sort of vegetable mould, on which the other plants and a few tufts of very luxuriant moss were growing.

They remarked, that almost all the plants had a part of their flowers cropped by the hares and other animals, which are fond of feeding in the sheltered and warm situations afforded by the banks next the sea.

On the 12th, the ice, setting westward, closed upon the land where the Griper was lying; by which she was forced against the submarine ice, and her stern was lifted two feet out of the water. The pressure made her timbers crack loudly: at first she heeled toward the land, but at last fell over towards the deep water. Under these circumstances, Lieut. Liddon landed all the journals and other documents of importance, and made every arrangement in his power to save the provisions and stores in case of shipwreck, which he had great reason to anticipate. In the mean while the ice remained so close about the Hecla, that any motion toward the shore must have placed her in a situation similar to that of the Griper. At last the ice slackened round the Griper, and she righted, without having received any worse injury than splitting her rudder; but she still remained in the same place, subject to the same danger from which she had just been relieved. The ice was still close and unbroken, and pressed so close upon the shore that nothing could have passed between. It moved a few yards from the Hecla, but in the evening of the 13th closed on her again, and pressed her firmly against the shore, but not so as to strain her materially. Soon after midnight the pressure increased so as to make the Hecla heel eighteen inches to-

ward the shore, but without appearing to strain her in the least. In case of anything worse, the boats were got out upon the beach, but in a few hours the pressure relaxed entirely, and the ice remained quiet.

Every moment's delay confirmed Capt. Parry in the opinion that it was expedient to attempt to penetrate to the southward, as soon as the ice would allow the ships to move at all, rather than persevere in pushing directly westward. He therefore ordered Lieut. Liddon to run back a certain distance eastward as soon as he could, without waiting for the *Hecla*, should that ship still be detained, and to look out for any opening to the southward, which might seem favorable to the object in view, and then wait for the *Hecla*.

CHAPTER XVII.

The *Hecla* moves again.—Position of the Ships.—They move to the Eastward.—Abandonment of the Westward Course.—Musk Oxen.—Retrograde Passage.

ON the fifteenth, Lieut. Liddon was enabled to sail, in the execution of his orders. Capt. Parry, however, observing that the *Griper* made little or no way, hoisted the signal of recall, with the intention of making one more attempt to penetrate westward. The ice had so far separated as to allow him to sail a mile and a half along shore, when he was again stopped. He was fortunate in finding a tolerably secure situation for the *Hecla*

within the grounded ice; but the Griper was left by the wind in a place where, should the ice press upon her, there could be no hope of safety. For fear of the worst, Capt. Parry made preparations to send parties to assist the Griper's company, if wreck should become unavoidable; but they were shortly after relieved from all anxiety on this account, by the recession of the ice from the shore, whereby the Griper was enabled to gain a station near the Hecla.

The ice to the west and southwest, as seen from their present station, gave them no reason to expect a speedy opening in the desired direction. It appeared as solid and compact as so much land; to which the inequalities of the surface gave it no small resemblance. Capt. Parry, therefore, determined to defer the attempt to try a more southern latitude no longer.

The point at which the ships were now lying, and which is the westernmost to which Arctic navigation has ever been carried, is in latitude $74^{\circ} 26' 25''$, and longitude $113^{\circ} 64' 43''$. Cape Dundas seen yet farther west is in longitude $113^{\circ} 57' 35''$, by which the length of Melville Island appears to be about an hundred and thirtyfive miles, and its breadth, at the meridian of Winter Harbour, from forty to fifty miles.

At nine, P.M. they were abreast of the place where they had landed on the 5th, and here perceived that the ice closed with the land a little to the eastward. There was no safety for the ships, unless they could get past one of the small points

at the embouchure of a ravine, against which a floe was setting the smaller pieces of ice, and had blocked up the passage before they arrived. After heaving two hours at the halsers, they succeeded in getting through, and moored the ships to some very heavy grounded ice near the beach. Hares were observed here, feeding on the sides of the cliffs, and a few ptarmigans were seen. The place where the Hecla was now secured, being the only one of the kind which could be found, was a little harbour, formed, as usual, by the grounded ice, some of which was fixed to the bottom in ten or twelve fathoms. One side of the entrance to this harbour consisted of masses of floes, very regular in their shape, placed quite horizontally, and broken off so exactly perpendicular, as to resemble a handsome, well-built wharf. On the opposite side, however, the masses to which they looked for security were themselves rather terrific objects, as they leaned over so much towards the ship, as to give the appearance of their being in the act of falling upon her deck; and as a very trifling concussion often produces the fall of much heavier masses of ice, when in appearance very firmly fixed to the ground, Capt. Parry gave orders that no guns should be fired near the ship during her continuance in this situation. The Griper was of necessity made fast near the beach, in rather an exposed situation, and her rudder unshipped, in readiness for the ice coming in; it remained quiet, however, though quite close, during the day, the weather being calm and fine.

In the evening of the 18th, some heat, ^{and} pieces of grounded ice to which the bow halser of the Hecla was fastened, fell off into the water, snapping the rope without injuring the ship. Nevertheless, as every alteration of this kind must materially change the centre of gravity of the whole mass, it was thought prudent to move the Hecla out of her harbour to the place where the Griper was lying, lest some of the bergs should fall upon her deck and crush or sink her.

On the 20th and 21st, the young ice formed to such a degree as to cement together all the loose ice about the ships; nor did it thaw on either of those days, though the sun shone clearly upon it for several hours. The main body remained close and firm in every direction. The same state of things obtained on the 22d, and in the morning of the 23d, the young ice was an inch and a half thick. A breeze springing up from the westward put it in motion, so that by noon the ships were able to warp out and proceed eastward. In a short time, however, the ice closed so firmly around them that they became wholly unmanageable, and received many blows, more severe than any they had experienced before. After having drifted with the ice six miles, they were made fast to some grounded ice.

The situation in which the ships were now placed, and the shortness of the remaining part of the navigable season, caused great anxiety. Judging from the experience of 1819, it was reasonable to conclude that about the 7th of September, was the limit beyond which the ships could not keep the

sea with ~~the~~ any degree of safety or prospect of success; but being strongly impressed with the idea that it was incumbent on him to make every possible effort, Capt. Parry determined to extend this limit to the 14th of September, before which date the winter would have set in. The prospect was not very encouraging, even with this extension; they had only advanced sixty miles this season, and the distance to Icy Cape was yet between eight and nine hundred miles, supposing them to find a clear passage. The provisions, too, were so far reduced in quantity, that by no means could they be made to hold out longer than till April, 1822, and the deficiency of fuel was even more apparent. These and other minor considerations induced Capt. Parry to ask the advice and opinions of his officers relative to the expediency of returning to England. They all agreed that any attempt to penetrate farther westward in their present parallel would be fruitless, and attended with loss of time that might be more profitably employed elsewhere. They advised that the vessel should run back along the edge of the ice, in order to look for an opening that might lead toward the American continent, and after a reasonable time spent in the search, to return to England. This advice agreeing with his own opinions, Capt. Parry resolved to comply with it.

A party was despatched in chase of a herd of musk cattle, that were seen grazing upon the shore, and two were killed. The gait of these animals is an awkward canter, which often makes them appear as if about to fall; yet the slowest of them can far

outstrip a man. These were the last animals of the kind killed. The total quantity of game taken while about the shores of Melville Island was as follows: three musk-oxen, twentyfour reindeer, sixtyeight hares, fiftythree geese, fiftynine ducks, and an hundred and fortyfour ptarmigans; affording three thousand seven hundred and sixtysix pounds of meat, in all.

The place where these last animals were killed was the most luxuriant pasture-ground they had yet met with on Melville Island. It consisted of about a dozen acres of short thick grass, intermixed with moss, which gave it almost the same lively appearance as that of an English meadow. It was covered with the dung and foot-tracks of musk-oxen, of which twelve or fourteen skulls were picked up near it: and it was here that the herd before mentioned was feeding. When walking over this spot, on which there were many small ponds of water, their surprise in some degree ceased at the immense distance which these animals must travel in the course of their annual visits to these dreary and desolate regions; as such a pasture, affording undisturbed and luxuriant feeding during the summer months, may, in spite of the general dreary appearance of the island, hold out sufficient inducement for their annual emigration.

On the twentyfourth the ships moved again, and found less ice as they advanced, so that when, on the morning of the 27th, they cleared the east end of Melville Island, the navigable channel was not less than ten miles wide. A constant look-out was

kept from the crow's nest for an opening to the south, but none occurred. The weather was hazy, so much so that they were again obliged to steer the ships the one by the other. As they proceeded, several islands hitherto unknown, were discovered, but no opening was seen in the ice, and when they had, on the 30th, reached longitude 90°, they became satisfied that there was no possibility of effecting their object, and Capt. Parry, therefore, conceived it to be his duty to return forthwith to England, in order that no time might be lost in following up his discoveries, if his government should deem fit to do so.

CHAPTER XVII.

The Ships explore the West Shore of Baffin's Bay.—Meet Vessels from England.—Esquimaux at the River Clyde.—Their Behaviour.

It would be tedious to follow the ships from day to day in their passage out of Barrow's Strait, or to give a detail of every field of ice and every fog they met. Nor can much be said of the different islands and points of land they passed. Nothing is known of them but their names and positions, and these may as well be learned from the map as from our narrative. After clearing Lancaster's Sound, Capt. Parry was of opinion that considerable service might be rendered by a survey of the western coast of Baffin's Bay, and therefore determined to keep as close along that shore as circumstances

would permit. He was confirmed in this resolution by the hope of finding some outlet into the Polar Sea in a lower latitude than Lancaster's Sound, which would be of great importance to the accomplishment of a northwest passage.

Keeping along this coast, on the morning of the third they passed some enormous icebergs, one of which was two hundred feet high above the sea. Being off a low point of land, they observed a range of hills inland, a thousand feet high; and the wind being light and variable, they landed on a bold sandy beach, two or three miles to the northward of a low point, at the entrance of an inlet, towards which they walked, and ascended a hill at the back of the point, in order to obtain a view of this opening. They now found that the perpendicular cliff formed the northeastern point of a remarkably steep and precipitous island, on each side of which there is a wide and bold entrance. Above the island, the inlet branches off in at least two different directions, which their situation would not allow them to trace to any great distance, but they saw no termination to either of them.

The mineral productions were found to consist principally of granite and gneiss: but there were also abundance of limestone and quartz, the latter beautifully white. The vegetation was tolerably luxuriant in some places upon the low land which borders the sea, consisting principally of the dwarf-willow, sorrel, saxifrage, and poppy, with a few roots of scurvy-grass. There was still a great deal of snow remaining even on the lower parts of the

land, on which were numerous ponds of water; on one of these a pair of young red-throated divers, which could not rise, were killed; and two flocks of geese, one of them consisting of not less than sixty or seventy, were seen by Mr Hooper, who described them as being very tame, running along the beach before the people, without rising, for a considerable distance. Some glaucous gulls and plovers were killed, and they met with several tracks of bears, deer, wolves, foxes, and mice. The coxswain of the boat found upon the beach part of the bone of a whale, which had been cut at one end by a sharp instrument, like an axe, with a quantity of chips lying about it, affording undoubted proof of this part of the coast having been visited at no distant period by Esquimaux. It is no more than probable, indeed, that they may inhabit the shores of this inlet, which time would not now permit the voyagers to examine. More than sixty icebergs, of very large dimensions, were in sight from the top of the hill, together with a number of extensive floes to the northeast and southeast, at the distance of four or five leagues from the land.

The latitude of the place of observation on shore was $71^{\circ} 15' 34''$, its longitude $71^{\circ} 17' 23''.6$, and the variation of the magnetic needle $91^{\circ} 28' 32''$ westerly.

While the officers were on shore, a piece of whale blubber, cut into a square form, was picked up on the water, which was soon after satisfactorily accounted for. The wind coming from the northwest in the night, the ships kept on their course; and about noon the next day the astonishment of

their companies was great at seeing three whale ships standing toward them. They afterward sailed away to the northward, and our friends lost sight of them. It was now evident that this coast, which, before the voyage of Capt. Ross had been believed inaccessible, had become a fishing station, like the opposite shore of Greenland.

On the 5th, they met another fishing ship, from which they first learned, among other political events, the death of George the Third. The master of this vessel also informed them that he had met some Esquimaux, a day or two before, a little to the southward. Thinking it a matter of some interest to communicate with these people, Capt. Parry resolved to pay them a visit, and accordingly sailed toward the spot where they had been seen.

On the 6th, they spoke with another whale ship; and toward night, being near the island at the entrance of the inlet called the river Clyde, they observed four canoes, paddling toward the ship. The Esquimaux approached, bawling and shouting, and came alongside without the least appearance of fear or suspicion. Their canoes were taken on board by their own desire, plainly intimated by signs, and with their assistance, and they at once came up the side without hesitation. This party consisted of an old man, apparently much above sixty, and three younger, from nineteen to thirty years of age. As soon as they came on deck, their vociferation seemed to increase with their astonishment, and, it may be added, their pleasure; for the reception they met seemed to create no less

joy than surprise. Whenever they received a present, or were shown anything which excited fresh admiration, they expressed their delight in loud and repeated ejaculations, which they sometimes continued till they were quite hoarse and out of breath with the exertion. This noisy mode of expressing their satisfaction was accompanied by a jumping, which continued for a minute or more, according to the degree of the passion which excited, and the bodily powers of the person who exercised it—the old man being rather too infirm, but still doing his utmost to go through the performance.

After some time passed on deck, during which a few skins and ivory knives were bought from them, they were taken down into the cabin. The younger ones received the proposal to descend somewhat reluctantly, till they saw that their old companion was willing to show them the example, and they then followed without fear. Our navigators had soon occasion to remark that they were much better behaved people than the Esquimaux who had visited their ships in 1818, on the northeastern coast of Baffin's Bay. Although they were much at a loss for an interpreter, they had no great difficulty in making the old man understand, by showing him an engraved portrait of an Esquimaux, that Lieutenant Beechey was desirous of making a similar drawing of him. He was accordingly placed on a stool near the fire, and sat for more than an hour with very tolerable composure and steadiness, considering that a barter for their clothes, spears, and whalebone, was going on at the same time

near him. He was, indeed, kept quiet by the presents which were given him from time to time ; and when this failed, and he became impatient to move, Capt. Parry endeavoured to remind him that he wished him to keep his position, by placing his hands before him, holding up his head, and assuming a grave and demure look. They now found that the old gentleman was a mimic, as well as a very good-natured and obliging man ; for, whenever the Captain did this, he always imitated him in such a manner as to create considerable diversion among his own people, and then very quietly kept his seat. While he was sitting for his picture, the other three stood behind him, bartering their commodities with great honesty, but in a manner which showed them to be no strangers to traffic. If, for instance, a knife was offered for any article, they would hesitate for a short time, till they saw that the whites were determined to give no higher price, and then at once consented to the exchange. In this case, as well as when anything was presented to them, they immediately licked it twice with their tongues, after which they seemed to consider the bargain satisfactorily concluded. The youngest of the party very modestly kept behind the others, and, before he was observed to have done so, missed several presents, which his less diffident, though not importunate, companions had received. As the night closed in, they became desirous to depart, and they left the ships before dark, highly delighted with their visit. As Capt. Parry had purchased one of their canoes, a boat was sent

to land its late owner, as only one person can sit in each. In going on shore, the canoes could beat the boat very much in rowing, whenever the Esquimaux chose to exert themselves, but they kept close to her the whole way. During the time that they were on board, a great aptness for imitating certain English words was observed in them; and, while going on shore, they took a particular liking to the expression of 'Hurra! give way!' which they heard Mr Palmer use to the boat's crew, and which they frequently imitated, to the great amusement of all parties.

Being desirous of seeing more of these people, of whom the first interview had given him a favorable impression, Capt. Parry determined to lay to during the night, and to take the ships higher up the inlet on the following day.

CHAPTER XVIII.

Intercourse with the Esquimaux.—Manner of Embarking and Disembarking in Canoes.—Esquimaux Tents.—Mode of Barter.—Stature and Appearance of the Esquimaux.

THE calm weather which prevailed during the night was succeeded by a breeze from the westward on the morning of the 7th, of which advantage was immediately taken to beat up the inlet, which proved a very extensive one. The sun did not break through the clouds till half after seven, when the expected eclipse was found to have commenced,

and Capt. Parry determined to land, with Captain Sabine, upon the nearest island, in order to observe the end of it, as well as to obtain the other usual observations, together with angles for the survey. At ten minutes past eight the sun again became obscured, and was not visible till twenty minutes past nine, when they had landed, and were prepared with their glasses, but were disappointed, in finding that the eclipse was over.

Soon after they had landed, the old Esquimaux and one of his younger companions paddled over from the main land, and joined them upon the island. They brought with them, as before, some pieces of whalebone and seal-skin dresses, which were soon disposed of, great care being taken by them not to produce more than one article at a time; returning to their canoes, which were at a little distance from the boat, after the purchase of each of their commodities, till their little stock was exhausted. Considering it desirable to keep up among them the ideas of fair and honest exchange, which they already seemed to possess in no ordinary degree, Capt. Parry did not permit them to receive anything as presents, till all their commodities had been regularly bought. While they were waiting to obtain the sun's meridian altitude, the Esquimaux amused themselves in the most good-natured and cheerful manner with the boat's crew; and Lieutenant Hoppner took this opportunity of making a drawing of the young man. It required, however, some show of authority, as well as some occasional rewards, to keep him quietly seated on

the rock for a time sufficient for this purpose ; the inclination they have to jump about, when much pleased, rendering it a penalty of no trifling nature for them to sit still for half an hour together. To show their disposition to do what little service was in their power, he afterwards employed himself in sharpening the seamen's knives, which he did with great expertness on any flat smooth stone, returning each as soon as finished to its proper owner, and then making signs for another, which he sharpened and returned in the same way, without any attempt, and apparently without the smallest desire, to detain it. The old man was extremely inquisitive, and directed his attention to those things which appeared useful, rather than to those which were merely amusing. An instance of this occurred on a tin canister of preserved meat being opened for the boats' crews' dinner. The old man was sitting on the rock, attentively watching the operation, which was performed with an axe struck by a mallet, when one of the men came up with a looking-glass. Capt. Parry held it up to each of the Esquimaux, who had also seen one the preceding evening, and then gave it into each of their hands successively. The younger one was quite in raptures, and literally jumped for joy for nearly a quarter of an hour : but the old man, having had one smile at his own queer face, immediately resumed his former gravity, and, returning the glass, directed his whole attention to the opening of the canister ; and when this was effected, begged very hard for the mallet which had performed so useful

an office, without expressing the least wish to partake of the meat, even when he saw them eating it with good appetites. Being prevailed on, however, to taste a little of it, with some biscuit, they did not seem at all to relish it, but ate a small quantity, from an evident desire not to offend, and then deposited the rest safely in their canoes. They could not be persuaded to taste any rum, after once smelling it, even when much diluted with water.

In getting out of their canoes as well as into them, great care is required to preserve the balance of these frail and unsteady coracles, and in this they generally assist each other. As Capt. Parry was leaving the island, and they were about to follow, the men rested on their oars to observe how they would manage this; and it was gratifying to see that the young man launched the canoe of his aged companion, and having carefully steadied it alongside the rock, till he had safely embarked, carried his own down, and contrived, though with some difficulty, to get into it without assistance. They seem to take especial care, in launching their canoes, not to rub them against the rocks, by placing one end gently in the water, and holding the other up high, till it can be deposited without risk of injury. As soon as the sailors commenced rowing, the Esquimaux began to vociferate their newly-acquired expression of 'Hurra! give way!' which they continued at intervals, accompanied by the most good-humored merriment, as the boat crossed over to the main land. There being now a little sea, occasioned by a weather tide, it was found that the boats

could easily beat their canoes in rowing, notwithstanding their utmost endeavours to keep up.

The two Esquimaux tents, which Capt. Parry was now going to visit, were situated just within a low point of land, forming the eastern side of the entrance to a considerable branch of the inlet, extending some distance to the northward. The situation is warm and pleasant, having a southwesterly aspect, and being in every respect well adapted for the convenient residence of these poor people. He landed outside the point, and walked over to the tents, sending the boats, accompanied by the two canoes, round the point. As soon as he came in sight of the tents, every living animal there, men, women, children, and dogs, were in motion, the latter to the top of the hill out of our way, and the rest to meet the party with loud and continued shouting; the word '*pilletay*' (give me) being the only articulate sound that could be distinguished amidst the general uproar. Besides the four men already seen, there were four women, one of whom, being about the same age as the old man, was probably his wife; the others were about thirty, twenty-two, and eighteen years of age. The first two of these, were supposed to be married to the two oldest of the young men, and had infants slung in a kind of bag at their backs, much in the same way as gipsies are accustomed to carry their children. There were also seven children, from twelve to three years of age, besides the two infants in arms, or rather behind their mothers' backs.

Capt. Parry began, as before, by buying whatev-

er they had to dispose of, giving in exchange knives, axes, brass kettles, needles, and other useful articles, and then added such presents as might be further serviceable to them. From the first moment of his arrival until he left them, or rather until he had nothing left to give, the females were particularly importunate, and 'pilletay' resounded from the whole troop, wherever the party went. They were extremely anxious to obtain buttons, apparently more on account of the ornament of the crown and anchor which they observed upon them, than from any value they set upon their use; and several of these were cut off, to please their fancy. When Capt. Parry first endeavoured to bargain for a sledge, the persons he addressed gave him distinctly to understand by signs, that it was not their property, and pointed towards the woman who owned it; though his ignorance in this respect offered a good opportunity of defrauding him, had they been so inclined, by receiving an equivalent for that which did not belong to them. On the owner's coming forward, the bargain was quickly concluded. The pikes which Capt. Parry gave in exchange, underwent the usual ceremony of licking, and the sledge was carried to the boat with the most perfect understanding on both sides. In another instance, an axe was offered by some of the Griper's gentlemen, as the price of a dog, to which the woman who owned the animal consented. To show that they placed full confidence in them, the axe was given to her before the dog was caught, and she immediately went away with a kind of halter

or harness of thongs, which they use for this purpose, and honestly brought one of the finest among them, though nothing would have been easier than to have evaded the performance of her contract. The readiness, however, with which they generally parted with their commodities, was by no means the effect of fear, nor did it always depend on the value of the articles offered in exchange; for having, as he thought, concluded a bargain for a second canoe belonging to the old woman, Capt. Parry desired the men to hand it down to the boat: but he soon perceived that he had misunderstood her, for she clung fast to the canoe, and cried most piteously till it was set down; he then offered a larger price than before, but she could not be induced to part with it.

The stature of these people, like that of Esquimaux in general, is much below the usual standard. The height of the old man, who was rather bent by age, was four feet eleven inches, and that of the other men from five feet four and a half to five feet six inches. Their faces are round and plump in the younger individuals; skin smooth; complexion not very dark, except that of the old man; teeth very white; eyes small; nose broad, but not very flat; hair black, straight and glossy; and their hands and feet extremely diminutive. The old man had a grey beard in which the black hairs predominated, and wore the hair rather long upon his upper lip, which was also the case with the eldest of the three others. One of these, the white men thought, bore a striking resemblance to their poor friend John

Sacheuse, well known as the Esquimaux who accompanied the former Expedition, the want of whose services they particularly felt on this occasion, and whose premature death had been sincerely lamented by all who knew him, as an intelligent and amiable man, and a valuable member of society.

The grown-up females measured from four feet ten to four feet eleven inches. The features of the two youngest were regular; their complexions clear, and by no means dark; their eyes small, black, and piercing; teeth beautifully white and perfect; and although the form of their faces is round and chubby, and their noses rather flat than otherwise, their countenances might, perhaps, be considered pleasing, even according to the ideas of beauty which habit has taught us to entertain. Their hair, which is jet black, hangs down long and loose about their shoulders, a part of it on each side being carelessly plaited, and sometimes rolled up into an awkward lump, instead of being neatly tied on the top of the head, as the Esquimaux women in most other parts are accustomed to wear it. The youngest female had much natural bashfulness and timidity, and was considered to be the only unmarried one, as she differed from the other three in not being tattooed upon the face. Two of them had their hands tattooed also, and the old woman had a few marks of the same kind about each wrist. None of the men or children were thus distinguished.

The children were generally good-looking, and the eldest boy, about twelve years of age, was a re-

markably fine and even handsome lad. They were rather scared at first ; but kind treatment and a few trifling presents soon removed their fears, and made them almost as importunate as the rest.

CHAPTER XIX.

Dress of the Esquimaux.—Description of their Tents.—Description of their Canoes.—Implements used in the Fishery.—Their Sledges.—Esquimaux Dogs.—Their Voracity.—Household Economy.

THE dress of the men consists of a seal-skin jacket, with a hood, which is occasionally drawn over the head, of which it forms the only covering. The breeches are also generally of seal-skin, and are made to reach below the knee, and their boots, which meet the breeches, are made of the same material. In this dress there was no difference from that of other Esquimaux, except that the jacket, instead of having a pointed flap before and behind, as usual, was quite straight behind, and had a sort of scollop before in the centre. In the dress of the women there was not so much regard to decency as in that of the men. The jacket is of seal-skin, with a short pointed flap before, and a long one behind, reaching almost to the ground. They had on a kind of drawers, similar to those described by Crantz as the summer dress of the Greenland women, and no breeches. The drawers cover the middle part of the body, from the hips to one-third down the thigh, the rest of which is entirely naked

nearly as far as the knee. The boots are like those of the men, and besides these they have a pair of very loose leggins, as they may be called, which hang down carelessly upon the top of the boots, suffering their thighs to be exposed in the manner before described, but which may be intended occasionally to fasten up, so as to complete the covering of the whole body. The children are all remarkably well clothed; their dress, both in male and female, being in every respect the same as that of the men, and composed entirely of seal-skin, very neatly sewed.

The tents which are their summer habitations are principally supported by a long pole of whale-bone, fourteen feet high, standing perpendicularly, with four or five feet of it projecting above the skins which form the roof and sides. The length of the tent is seventeen, and its breadth from seven to nine feet, the narrowest part being next the door, and widening towards the inner part, where the bed, composed of a quantity of the small shrubby plant, the *Andromeda Tetragona*, occupies about one-third of the whole apartment. The pole of the tent is fixed where the bed commences, and the latter is kept separate by some pieces of bone laid across the tent from side to side. The door, which faces the southwest, is also formed of two pieces of bone, with the upper ends fastened together, and the skins are made to overlap in that part of the tent, which is much lower than the inner end. The covering is fastened to the ground by curved pieces of bone, being generally parts of the

whale ; the tents were ten or fifteen yards apart, and about the same distance from the beach.

The canoe which Capt. Parry purchased, and which was one of the best of the five that he saw, was sixteen feet eleven inches in length, and its extreme breadth two feet one inch and a half ; two feet of its fore-end were out of the water when floating. It differed from the canoe of Greenland, in being somewhat lower at each end, and also in having a higher rim or gun-wale, as it may be termed, round the circular hole where the man sits, which may make them somewhat safer at sea. Their construction is, in other respects, much the same, the timbers, or ribs, which are five or six inches apart, as well as the fore and aft connecting pieces, being of whalebone or drift-wood, and the skins with which they were covered, those of the seal and walrus. When the canoes are taken on shore, they are carefully placed on two upright piles or pillars of stones, four feet high from the ground, in order to allow the air to pass under to dry them, and prevent their rotting. The paddle is double and made of fir, the edges of the blade being covered with hard bone, to secure them from wearing.

The spears or darts, which they use in killing seals and other sea animals, consist, like the harpoons of our fishermen, of two parts, a staff, and the spear itself ; the former is usually of wood, when so scarce and valuable a commodity can be obtained, from three and a half to five feet in length, and the latter of bone, about eighteen inches long,

sometimes tipped with iron, but more commonly ground to a blunt point at one end, while the other fits into a socket in the staff, to which it is firmly secured by thongs. The lines which they attach to their spears are very neatly cut out of seal-skins, and when in a state of preparation are left to stretch till dry, between the tents, and then made up into coils for use. They make use of a bladder fastened to the end of the line, in the same manner as the other Esquimaux. Beside the spears, Capt. Parry purchased an instrument having a rude hook of iron let into a piece of bone, and secured by thongs to a staff, the hook being sharply pointed, but not barbed. While Capt. Parry was on the island (to which he had applied the name of Observation Island), it happened that a small bird flew near, when one of the Esquimaux made the sign of shooting it with a bow and arrow, in a manner which could not be misunderstood. It is remarkable, therefore, that none of these weapons were found about their tents, except a little one of five or six inches long, the bow being made of whalebone, and the arrow of fir, with a feather at one end, and a blunt point of bone at the other, evidently appearing to be a child's toy, and intended, perhaps, to teach the use of it at an early age.

The runners of the only sledge seen were composed of the right and left jaw-bones of a young whale, being nine feet nine inches long, one foot seven inches apart, and seven inches high from the ground. They are connected by a number of parallel pieces, made of the ribs of the whale, and

secured transversely with seizings of whalebone, so as to form the bottom of the sledge, and the back is made of two deers' horns placed in an upright position. The lower part of the runners is shod with a harder kind of bone, to resist the friction against the ground. The whole vehicle is rudely executed, and, being nearly twice the weight of the sledges seen among the northern Esquimaux, is probably intended for carrying heavy burdens. The dogs were not less than fifty or sixty in number, and had nothing about them different from those on the eastern coast of Baffin's Bay, except they do not stand near so high as those of the latitude of 76°. They are very shy and wild, and the natives had great difficulty in catching them while the whites were by, as well as holding them in when caught. Some of them have much more of the wolf in their appearance than others, having very long heads and sharp noses, with a brushy tail, almost always carried between the legs; while the bodies of others are less lank, their noses are less sharp, and they carry their tails handsomely curled over their backs: their color varied from quite dark to brindled. The ravenous manner in which they devour their food is almost incredible. Both the old and young ones, when a bird is given them, generally swallow feathers and all: and an old dog that Capt. Parry purchased, though regularly fed, while on board, by a person appointed for that purpose, ate up, with great avidity, a large piece of canvass, a cotton handkerchief, which one of the men had just washed and laid down by his side,

and a part of a check shirt. The young dogs will at any time kill themselves by over-eating, if permitted. The children appeared to have some right of property in the smaller puppies, or else their parents are very indulgent to them; for several bargains of this kind were made with them, without any objection or interference on the part of the parents, who were standing by at the time.

Within a few stones, irregularly placed in a corner of each tent, was a lamp of oil and moss, and over each of these was suspended a small stone vessel of an oblong shape, and broader at the top than at the bottom, containing a large mess of sea-horse flesh, with a great quantity of thick gravy. Some ribs of this meat were by no means bad looking, and but for the blood mixed with the gravy, and the dirt which accompanied the cooking, might, perhaps, be palatable enough. Capt. Parry bargained with a woman for one of the stone vessels, giving her a brass kettle in exchange. Before she gave it into his possession, she emptied the meat into another vessel, and then, with the flap of her jacket, wiped out the remains of the gravy; thus combining with what our notions of cleanliness incline us to consider a filthy act, an intention of decency, and a desire to oblige, which, however inconsistent, it was still pleasing to observe. Some of their vessels were made of whalebone, in a circular form, one piece being bent into the proper shape for the sides, and another flat piece of the same material sewn to it for a bottom, so closely as to make it perfectly water tight. Their knives are

made of the tusks of the walrus, cut or ground sufficiently thin for the purpose, and retaining the original curve of the tusk, so as to resemble the little swords which children have as toys in England. As they do not appear to have any instrument like a saw, great time and labor must be required in making one of these knives, which seem to answer most of the purposes to which they have occasion to apply them.

CHAPTER XX.

Farther Particulars respecting the Esquimaux.—Their Number.—Health.—Demeanour.—Return of the Expedition to England.

SEVERAL proofs were observed that this people had had some previous communication, directly or indirectly, with the civilized world; such as some light blue beads, strung by themselves on thin leathern threads; and an instrument for chopping, very much resembling a cooper's adze, which had evidently been secured to a handle of bone for some time past, and of which the iron was part of an old file.

The short time which our friends were among them, as well as the want of an interpreter, prevented their obtaining much of the information, which would have been interesting, respecting the language, manners, and number of this tribe of Esquimaux. They call the bear, *nennook*; the deer, *tooktook*; and the hare, *ookalik*; being nearly the

same words as those used on the eastern coast of Baffin's Bay. As it was considered a matter of some interest to ascertain whether they were acquainted with the musk-ox, a drawing of that animal was put before the men who were on board. The small size of it seemed, at first sight, to confound them; but, as soon as a real head and horns were produced, they immediately recognised them, and eagerly repeated the word *oomingmack*, which at once satisfied us, that they knew the musk-ox, and that this was the animal spoken of by the Esquimaux of Greenland, under the same name, somewhat differently pronounced.

To judge by their appearance, and what is a better criterion, the number of their children, there could be little doubt that the means of subsistence which they possess are very abundant; but of this there was more direct proof, in the quantity of sea-horses and seals found concealed under stones, along the shore of the north branch, as well as on Observation Island. Mr Fife reported that, in sounding the north branch, he met with their winter-huts, above two miles above the tents on the same shore, and that they were partly excavated from a bank facing the sea, and the rest built round with stones.

No appearance of disease was seen among the seventeen persons who inhabited the tents, except that the eyes of the old couple were rather bleared, and a very young infant looked pale and sickly. The old man had a large scar on one side of his head, which he explained very clearly to be a wound

he had received from a *nennook* (bear). Upon the whole, these people may be considered in possession of every necessary of life, as well as of most of the comforts and conveniences which can be enjoyed in so rude a state of society. In the situation and circumstances in which the Esquimaux of North Greenland are placed, there is much to excite compassion for the low state to which human nature appears to be there reduced; a state in few respects superior to that of the bear or the seal, which they kill for their subsistence. But, with these, it was impossible not to experience a feeling of a more pleasing kind: there was a respectful decency in their general behaviour, which at once struck the visitors as very different from that of the other untutored Esquimaux, and in their persons there was less of that intolerable filth by which these people are so generally distinguished. But the superiority for which they are the most remarkable is, the perfect honesty which characterized all their dealings. During the two hours that the men were on board, and for four or five hours that they were subsequently among them on shore, on both which occasions the temptation to steal was perhaps stronger than we can well imagine, and the opportunity of doing so by no means wanting, not a single instance occurred, of their pilfering the most trifling article. It is pleasing to record a fact, no less singular in itself, than honorable to these simple people.

Having made the necessary observations, the whites went to the tents to take leave of their new

acquaintance. The old man seemed quite fatigued with the day's exertions, but his eyes sparkled with delight, and it was thought with gratitude too, on being presented with another brass kettle, to add to the stores with which they had already enriched him. He seemed to understand them when they shook him by the hand; the whole group watched them in silence, as they went into the boat, and, as soon as they had rowed a few hundred yards from the beach, quietly retired to their tents.

After leaving the river Clyde, the ships proceeded along the shore till the 12th, when they came to the ice. The coast was generally found mountainous, and presented the same features as the lands already described. Finding the state of the ice such as to preclude the possibility of following the shore any farther, they ran back along its edge to the northward, in order to get round it, if possible.

We suppose that by this time the reader is tired of bergs, and fields, and floes; and shall not therefore say anything more of their exit from Baffin's Bay or of their passage across the Atlantic. Let it suffice that the ships parted company. The *Hec-la* arrived at the Orkney Islands on the 28th of October, and the *Griper* on the first of November. Thus did they return from a voyage of eighteen months duration, in good health and spirits, with the loss of only one man.

CAPTAIN PARRY'S

SECOND VOYAGE OF DISCOVERY.

CHAPTER I.

The Hecla and Fury fitted out.—They reach Davis' Strait.—Difficulties in the Ice.—The Ships are visited by Esquimaux.—Their Behaviour.

THE discoveries made by the expedition under Capt. Parry in 1819–20 being believed to afford a strong presumption of the existence of a Northwest Passage to the Pacific Ocean, the British government commanded that another attempt should be made to discover it. The Hecla having been found well adapted to this kind of service, the Fury, a ship of precisely the same class, was selected to accompany her. Capt. George F. Lyon was appointed to command the Hecla, and Capt. Parry, whose efforts had made him justly celebrated, was commissioned to command the expedition.

Some alterations in the interior arrangements of the vessels, such as were suggested by the experience of Capt. Parry, were made. Among these was an apparatus for melting snow, which was found

very useful, and was so little in the way that it could not even be seen. Cots and hammocks were substituted for the former bed places, and some improvements were made in the manner of victualling the ships.

In his official instructions, Capt. Parry was directed to proceed into Hudson's Strait till he should meet the ice, when the Nautilus Transport, which was placed at his disposal, was to be cleared of its provisions and stores. He was then to penetrate westward till he should reach some land which he should be convinced was a part of the American *continent*, at some point north of Wager River. If he reached the Pacific, he was to proceed to Kam-schatka; thence to Canton or the Sandwich Islands, and thence to England, by whatever route he might deem most convenient.

Accordingly, in the beginning of April, 1821, the three vessels sailed from England. Nothing worthy of note occurred till they met with the ice in Davis' Strait, where the vessels were moored to an iceberg, and the Nautilus was unladen. This done, she parted company on the 1st of July, and sailed for England, while the Fury and Hecla stood toward the ice, which they reached a little before noon, and ran along its edge, keeping as much to the westward as possible.

On the third, the ice prevented their farther progress in that direction, covering the whole sea as far as the eye might reach. In the afternoon, the ships entered it with the tide, which carried them at the rate of three miles an hour. It here con-

sisted of large, though loose pieces of broken floes, with many high hummocks, and drawing a great deal of water.

A fresh breeze springing up on the morning of the 5th, they succeeded in pushing the ships in shore, where they found a lane of tolerably open water; but as the tide was against them, as soon as they came to the end of the lane they drifted to the eastward, and lost the little distance they had gained. They were now within six miles of the south point of Resolution Island, which is in latitude $61^{\circ} 20'$ and longitude $64^{\circ} 55'$.

In the night, a considerable swell caused the ships to strike violently and constantly against the ice. They remained thus beset several hours, drifting about at random. In the morning, they were five or six miles apart. This exposure to the swell of the main ocean is the principal danger on first entering the ice about the mouth of Hudson's Strait, which is completely open to the Atlantic. A small quantity of loose ice is sufficient to protect a ship from the sea, provided it be closely packed; but when the pieces are so far separate as to admit the swell, the concussions are too violent for a ship to resist long. On this account it is prudent not to enter the ice, unless there is a fair prospect of getting twenty or thirty miles within the margin.

The ships remained thus beset till the morning of the 16th, when the ice loosening, they commenced 'boring,' and continued the operation the whole day, which enabled them to join three vessels, that had been in sight some days. They were bound

to Hudson's Bay, with emigrants to Lord Selkirk's settlement on the Red River. Thus they proceeded slowly till the 21st, when the wind coming ahead, they made fast to a floe near an island. While in the act of mooring, they heard voices in shore, and presently saw some Esquimaux coming off to them. Seventeen of them came alongside the *Fury*. Having hauled their *kayaks* (canoes) upon the floe, they began to barter their commodities, consisting of seal and whale blubber, whale-bone, spears, lines, and the skins of the seal, bear, fox, deer, and dog. Capt. Parry's first endeavour was to procure as much oil as possible, of which, as he had been informed by the Hudson's Bay ships, several tons are thus almost annually obtained from these people. He soon found that they had been well accustomed to bargain-making, for it was with some difficulty that he could prevail upon them to sell the oil for anything of reasonable value. They frequently gave the whites to understand that they wanted saws and harpoons in exchange for it, and as these were articles which they could not spare, it was not without trouble that they obtained, in the course of the evening, two barrels of blubber, in exchange for several knives, large nails, and pieces of iron hoop, which was certainly a dear bargain on their side. If the savages saw more than one of these at a time, they would try hard to get the whole for the commodity they were offering; though, when the English had for some time persisted in refusing, they would not only accept what was offered, but jump for joy at having obtained it. They always

licked the articles given them, and in one instance only was manifested any inclination to break the contract after this process had been gone through.

Shortly after these men had arrived, a large *oomiak*, or women's boat, made its appearance, containing six or seven females and four men, the oldest of the latter, as seemed usual among them, steering the boat with a rude oar of wood. The women could not be induced to land upon the floe, but held up skins and small narrow strips of well-tanned leather to exchange, loudly vociferating *pilletay* (give me) the whole time. There were in this boat several skins of oil and blubber, which Capt. Parry tried hard to purchase, but nothing could induce the old man to part with more than one skin of it; for what reason the Captain could not tell, except that he hoped, by perseverance, to obtain a higher price. On Capt. Parry's desiring his men to hand out a second skin of oil, as an equivalent for which he put into the old man's hand a second knife, he resisted most vehemently, pushing the men aside in the boat with a violence the Captain had never seen the Esquimaux use on any other occasion. One of the younger men then came forward, and was lifting up the stretcher of their boat, to strike the people, who were good-humoredly laughing at the old man's violence, when Capt. Parry thought it high time to interpose, and raising a boat-hook over the head of the Esquimaux, as if about to strike them, soon brought them into a cooler mood; after which, to prevent further altercation, he ordered his people out of the boat. They had, by this time,

succeeded in purchasing all the oil brought by the first canoes ; and as the old fellow, who was commanding officer of the *oomiak*, obstinately persisted in his refusal to sell his, Capt. Parry ordered him away, when he immediately rowed to the Hecla, and sold his oil for less than he might have obtained at first. Four other *oomiaks* afterwards came from the shore, from which the ships were distant five or six miles. Each of these contained from fourteen to twentysix persons, the majority being females and young children. Upon the whole, not less than one hundred of the natives visited the ships in the course of the evening.

These people possessed in an eminent degree the disposition to steal all they could lay their hands on, which has almost universally been imputed to every tribe of Esquimaux hitherto visited by Europeans. They more than once tried the art of picking pockets, and were as bold and unembarrassed as ever, immediately after detection. It is impossible to describe the horribly disgusting manner in which they sat down, as soon as they felt hungry, to eat their raw blubber, and to suck the oil remaining on the skins they had just emptied, the very smell of which, as well as the appearance, was to the sailors almost insufferable. The disgust which the seamen could not help expressing at this sight seemed to create in the Esquimaux the most malicious amusement ; and when the whites turned away, literally unable to bear the sight without being sick, they would, as a good joke among themselves, run after them, holding out a piece of blubber

or raw seal's flesh, dripping with oil and filth, as if inviting them to partake of it. Both the men and women were guilty of still more disgusting indecencies, which seemed to afford them amazing diversion. A worse trait even than all this was displayed by two women alongside the Hecla, who, in a manner too unequivocal to be misunderstood, offered to barter their children for some article of trifling value, beginning very deliberately to strip them of their clothes, which they did not choose to consider as included in the intended bargain.

Upon the whole, it was impossible not to receive a very unfavorable impression of the general behaviour and moral character of the natives of this part of Hudson's Strait, who seem to have acquired, by an annual intercourse with ships for nearly a hundred years, many of the vices which unhappily attend a first intercourse with the civilized world, without having imbibed any of the virtues or refinements which adorn and render it happy.

CHAPTER II.

Offensive Conduct of the Esquimaux.—Description of the Savage Islands.
—Ships make the Coast of Labrador.—More Esquimaux.

EARLY on the morning of the 22d, the Esquimaux visited the ships again, and disturbed the ships' companies, who were engaged at divine worship,

by their clamor. They behaved throughout in the same offensive manner. A little before noon, the wind coming southward, and the ice being somewhat loosened, the ships cast off, and made sail up the Strait. As they proceeded, both wind and ice combined to favor their progress, the former in strength and direction, and the latter by opening into loose streams, so that, for the first time since entering the Strait, all the studding-sails were set, with some prospect of deriving advantage from them.

On the 24th, they reached the Savage Islands, and landed on one of them. They are many—all exhibiting the same appearance of utter sterility. That on which they landed was from six to eight hundred feet above the level of the sea. Here they noticed the same appearances of an Esquimaux camp as had been seen at Melville Island, with a few pieces of fir, which proved that the savages in these parts were not in want of wood, since they could afford to leave it behind them. Hares and several species of birds were seen on this island.

As soon as the exploring party returned on board, all sail was made to the westward, the sea being now nearly free from ice. The next day the hills on the coast of Labrador were seen. Thus they kept on till the 31st, discovering islands as they proceeded. On the afternoon of this day, an Esquimaux *oomiak* was seen coming from the shore of Salisbury Island, under sail, accompanied by eight kayaks. In this boat were sixteen persons, of which two were men, and the rest women and children.

In dress and personal appearance these people did not differ from the Esquimaux last seen, but their behaviour was far less offensive.

On the first of August, the ships kept on westward between Nottingham Island and the north shore, which is fringed with small islands. This channel is about twelve miles wide. In the course of the morning, some Esquimaux came to the ships from the main land, bringing oil, skin dresses, and walrus tusks, which they exchanged for any trifle that was offered. They also offered toys for sale, such as models of canoes, weapons, &c. Here, for the first time, the navigators saw the dresses of the savages lined with the skins of birds, having the feathers inside.

Having run forty miles in the night without seeing any ice, they came the next morning to a pack so close as to prevent their farther progress. The ships received very heavy blows, and with considerable difficulty got clear of it. They ran along the edge several miles to the northward, in search of an opening; but finding none, they stood back to the southwest, to try what could be done in that quarter.

CHAPTER III.

The Ships make the Northern Land, Southampton Island, Frozen Strait.—
The Ice begins to make.—The Ship gets into Winter Quarters.—Shrimps,
Foxes.—A Theatre is opened.—The Northern Lights.

THE expedition being now about to enter upon ground hitherto unexplored, it became necessary for Capt. Parry to decide on the route he should pursue with most advantage ; and after mature deliberation, he came to the resolution to attempt a direct passage of the Frozen Strait, though he greatly feared the loss of time that would be the consequence of a failure.

After contending with the ice for several days, on the 11th the ship succeeded in getting to the northern land, and a party of the officers landed upon a small rock, or islet, a mile and a half from the shore. They found it to consist entirely of gneiss rock, with a little moss, and a very few other plants growing in the crevices. It would seem that no place, however barren, is exempt from the visits of the Esquimaux ; for their traces were found even here. The tide rose a foot in less than an hour. Soon after the party returned on board, a fresh gale from the north compelled them to make the ship fast to the largest floe near, in order not to lose much ground. The wind drifted them back nine or ten miles to the eastward during the night, but was nevertheless of great service to them, for it dispersed the ice so as to leave the ships room to

work. Here it may be remarked that they always found a head wind of considerable advantage, though it blew directly against them, as it brought away large bodies of ice from that quarter, consequently leaving an interval of open water.

The gale moderated about noon, and they cast off from the floe, and made sail. They made considerable progress till evening, when the ice closed round them again. They could now see the northernmost point of Southampton Island. After sunset the ice opened sufficiently to allow them to get a mile or two farther. Great numbers of narwhales played about the ships all night.

The weather about this time was very different from that to which our voyagers had been accustomed in the icy seas. The days were temperate and clear, and the nights just cold enough to form a very thin plate of ice on the surface of the sea in sheltered places, and in the pools of water on the floes.

After sunset on the 13th, they descried land to the westward, which they believed to be a part of the continent. Yet they continued closely beset, and on the 15th the Hecla drifted back with the ice, out of sight of her consort. This was partly owing to the extraordinary refraction upon the horizon, which apparently diminished and distorted objects at no great distance, in a wonderful manner.

In the evening, Capt. Parry left the *Fury* in a boat, in order to explore the channel, and landed on Southampton Island, where he slept all night.

The part of this great island where he took up his lodgings was a thousand feet high, and composed of gneiss. The boat's crew made a tent of a sail, and passed the night very comfortably. A great many whales played about the beach all night. The latitude of this place was $65^{\circ} 28'$ and the longitude $84^{\circ} 40'$.

At daylight, Capt. Parry ascended the hill above his sleeping place, from whence he perceived land stretching round to the west and northward, so as apparently to leave no opening in that quarter. This land appeared low, and of a yellowish color. To the westward was a large expanse of open water. Traces of Esquimaux were observed here also. Moss, sorrel, ground willow, and some other plants grew in the hollows and fissures in the rocks, in abundance. Soon after Capt. Parry returned on board, the Hecla hove in sight; upon which, the Fury set sail, and beat through the channel.

On the morning of the 17th, the weather being too foggy to move, parties from both ships went on shore to examine the country and to procure specimens of its natural productions. They landed on a flat and very rough beach, principally composed of sharp masses of limestone, over which, at low water, it was difficult to drag the boats. Mixed with these were some pieces of gneiss and granite, but the lime is by far the most abundant. This land, which rises gradually from the beach, but is in no part more than sixty or seventy feet above the level of the sea, was full of ponds of fresh water, and in

almost all the intermediate parts there was abundance of fine vegetation, consisting of grass, moss, and various other plants, of which specimens were brought on board. A splendid specimen of the *colymbus arcticus*, and also a red-throated diver (*colymbus septentrionalis*), were obtained by the gentlemen of the Hecla. The former, though very wild, were numerous, as were also plovers of two kinds, the *charadrius pluvialis*, and *hiaticula*. Nine or ten deer, of which several were fawns, with a large buck, as usual bringing up the rear of the herd, were met with by some of the people, but they would not suffer themselves to be approached within gunshot. A great number of fine black whales were playing about near the beach, and, from the total absence of ice, would have afforded a rich and easy harvest to a fishing ship. Several seals were also seen, and they were in hopes of finding some sillocks near the shore, but had no success with the seine, which was twice hauled upon the beach. They met with the remains of several Esquimaux habitations in different places along the shore, and in one spot a conspicuous mark had been left by these people, consisting of several stones placed one over the other. The beach being favorable for measuring a base, they ran off one above a mile in length, and obtained the necessary angles for the survey, together with the usual observations for fixing their geographical position.

As soon as the weather cleared up, they returned on board, and sailed to the northeast, where alone they had any chance of finding an outlet. Having

ascertained the continuity of land round this inlet, they gave it the name of Duke of York's Bay. It was now certain that the object of the expedition could not be effected in that direction; and they therefore sailed back, through the narrow channel by which they had entered, with the intention of seeking an opening farther north, without delay.

We should never have done, were we to tell of every obstacle that hindered or delayed the progress of the ships; and will therefore in future say as little about such matters as possible. They pursued their intended course along the shore, when the wind and weather permitted: when unavoidably detained, they landed. At one point they found the remains of no less than sixty Esquimaux habitations, consisting of stones laid one over the other in very regular circles, eight or nine feet in diameter, besides nearly a hundred other rude though certainly artificial structures, some of which had been fire-places, others store-houses, and the rest tolerably built walls, four or five feet high, placed two and two, and generally eight or nine feet apart, which these people use for their canoes, as well as to keep the dogs from gnawing them. A great many circles of stones were also seen more inland. About three miles to the N.N.W. of the landing-place, the people reported having seen fifteen others of the same kind, and what they took to be a burying-ground, consisting of nine or ten heaps of large stones, of three feet in diameter, and as many in height. Under these were found a variety of little implements, such as arrow or spear-heads tipped with stone or

iron, arrows, small models of canoes and paddles, some rough pieces of bone and wood, and one or two strips of asbestos, which, as Crantz informs us, is used by the natives of Greenland for the wick of their lamps, and for applying hot, in certain diseases, to the afflicted part. Under these articles were found smaller stones, placed as a pavement, six or seven feet in length, which, in the part not concealed by the larger stones, was covered with earth. The men had not the curiosity or inclination to dig any deeper; but a human skull was found near the spot. They also reported that, several miles inland of this, they observed stones set up as marks, many of which were also met with in the neighbourhood of the point. Of these marks, which occur so abundantly in every part of the American coast that they visited, they could not then conjecture the probable use, but afterwards learned that the Esquimaux set them up to guide them in travelling from place to place, when a covering of snow renders it difficult to distinguish one spot from another. They found among the stones some seals' bones, with the flesh still upon them, which seemed to indicate that the natives had occupied this station during a part of the same season; and judging from the number of circles collected in this place, and still more from subsequent knowledge of these people, it is probable that not less than one hundred and twenty persons had taken up their residence here at the same time.

CHAPTER IV.

Repulse Bay.—Frozen Strait.—Captain Lyon makes a Journey.—Appearance of the Coast.—Interview with a Party of Esquimaux.

THE land on the northern and western sides of Repulse Bay does not exceed six or seven hundred feet in height, while that on the south rises, perhaps, full a thousand feet above the level of the sea. The shore on which they landed is composed of gneiss rock, traversed by broad veins of red feldspar running in almost every direction. Quartz and mica also occurred in separate masses, as well as white limestone lying in loose fragments on the surface. Before they landed in the morning, the snow which fell the preceding day had quite disappeared from the north shore, and by noon the land all round the bay had resumed its dark appearance. They saw several reindeer and hares, some ducks, dovebies, knots, (*tringa cinerea*,) snow buntings, and a white owl. An ermine (*erminea mustela*,) a few ptarmigans and a hare, were killed. Mice (*mus hudsonius*) were very abundant, particularly among the stones of the Esquimaux tents. It cannot be said whether the seals' flesh remaining on some of the bones was any attraction to them, but it is certain that two of them being put together into a cage, the larger killed the other and ate a part of it. Several black whales were seen in the bay in the course of the day. There was here no want of vegetation, which indeed was in many parts ex-

tremely luxuriant; and specimens of every plant were carefully preserved.

The latitude of this place was $66^{\circ} 30'$; the longitude $86^{\circ} 30'$. From all indications the water through which they had been sailing was the hitherto imperfectly known Frozen Strait, and their perquisitions proved that the land round Repulse Bay is continuous. This being determined, Capt. Parry resolved to keep along the land to the northward, and examine every bend or inlet which might appear likely to afford a practicable passage to the westward.

Sailing on the 23d along the northern shore of Frozen Strait, it was observed that the land appeared in one place to consist of islands only, behind which no land was visible. This part of the coast appeared to Capt. Parry so favorable to the accomplishment of his enterprise, that he resolved to examine it more closely. Having beat up to the mouth of an opening that seemed practicable, he found the greater part of the channel filled with a body of ice, rendering examination in ships or boats impossible. The only means, therefore, of exploring it were, to despatch a party by land. Capt. Lyon undertook this service, accompanied by five persons, furnished with a tent and four days' provision. The ships were anchored to await his return a mile from the shore. The flood-tide came *out* of this inlet, a circumstance that materially strengthened their hopes of success.

Capt. Lyon first landed on an island, and then crossed a strait to a steep point. Thence pro-

ceeding northward to a high hill, he found the strait continuous, and returned to the ships. On this short journey he passed the remains of a great many Esquimaux habitations. The result of Capt. Lyon's excursion was to convince all concerned that a communication existed here between Frozen Strait and a sea to the northward and eastward of it, and Capt. Parry determined to explore it as far as possible.

The rocks upon this coast, as well as those in the interior, are composed of gneiss, traversed occasionally by veins of quartz and feld-spar, and having intermixed with it much of a green substance which appeared to be epidote, and which they had not met with so abundantly anywhere else. On the surface of the ground, but most especially near the beach, were many loose pieces of limestone of a white color and quite sharp-edged. On the banks of the lakes the vegetation was quite luxuriant, giving them, when viewed from an eminence, and assisted by bright sunshine, a cheerful and picturesque appearance. There was no snow upon the land, except here and there a broad thick patch in the hollows, where it may probably remain year after year undissolved; but with the exception of these patches, there was nothing in the appearance of the country to remind one of being near the polar circle. Piles of stones and the remains of Esquimaux habitations were everywhere to be seen, and one of the officers met with their marks even on the highest hills; but none appeared of recent date. The reindeer were here very numerous. Mr Ross

saw above fifty of them in the course of his walk, and several others were met with near the tents. A large one was shot by one of the men, who struck the animal, as he lay on the ground, a blow on the head with the butt-end of his piece, and leaving him for dead, ran towards the tents for a knife to bleed and skin him, when the deer very composedly got on his legs, swam across a lake, and finally escaped. A small fawn was the only one killed. Three black whales and a few seals were playing about near the beach.

After drifting about some time in the ice, and more than once narrowly escaping shipwreck, measures were taken to survey this part of the Frozen Strait; but little knowledge was gained by all their efforts. On the 1st of September, the prospect of getting northward was by no means encouraging; and they were, from time to time, beset with ice, and drifted back. On the 3d, they found that after a laborious investigation, which had occupied a whole month, they had returned to nearly the same spot where they had been on the 6th of August, near Southampton Island.

They were, at last, again enabled to return to the coast north of Southampton island, and finding it impracticable to continue the survey in the ships, Capt. Parry departed in a boat to learn as much as possible of the adjacent regions. An account of his progress would be a mere list of the names of bays, capes, and points of land; but on this expedition he met with a party of Esquimaux. The description of these people will be best given in his own words.

‘Having passed several islands on our left, we kept close along the northern shore, which here began to trend considerably to the southward of west. In running along the coast with a fresh and favorable breeze, we observed three persons standing on a hill, and, as we continued our course, they followed us at full speed along the rocks. Having sailed into a small sheltered bay, I went up, accompanied by Mr Bushnan, to meet them on the hills above us. In sailing along the shore we had heard them call out loudly to us, and observed them frequently lift something which they held in their hands; but on coming up to them, they remained so perfectly mute and motionless, that, accustomed as we had been to the noisy importunities of their more sophisticated brethren, we could scarcely believe them to be Esquimaux. There was besides a degree of lankness in the faces of the two men, the very reverse of the plump, round, oily cheeks of those we had before seen. Their countenances at the time impressed me with the idea of Indian rather than of Esquimaux features; but this variety of physiognomy we afterwards found not to be uncommon among these people. The men appeared about forty and twentytwo years of age, and were accompanied by a good-looking and good-humored boy of nine or ten. They each held in their hand a seal skin case or quiver, containing a bow and three or four arrows, with a set of which they willingly parted, on being presented with a knife in exchange. The first looks with which they received us betrayed a mixture of stupidity and apprehen-

sion, but both wore off in a few minutes, on our making them understand that we wished to go to their habitations. With this request they complied without hesitation, tripping along before us for above two miles over very rough ground, and crossing one or two considerable streams running from a lake into the sea. This they performed with so much quickness that we could with difficulty keep up with them, though they good-naturedly stopped now and then till we overtook them. We were met on our way by two women, from twenty to twentyfive years of age, having each a child at her back; they too accompanied us to their tent, which was situated on a high part of the coast overlooking the sea. It consisted of a rude circular wall of loose stones, from six to eight feet in diameter, and three in height, in the centre of which stood an upright pole made of several pieces of fir-wood lashed together by thongs, and serving as a support to the deer-skins that formed the top covering. Soon after our arrival we were joined by a good-looking modest girl of about eight, and a boy of five years old. Of these nine persons, which were all we now saw, only the elder man and two of the children belonged to this tent, the habitations of the others being a little more inland. The faces of the women were round, plump, tattooed, and in short completely Esquimaux. During the cursory examination of these people's dresses, which we had now an opportunity of making, I observed nothing beyond the peculiarities which have been repeatedly described, except that the tails of the women's jackets

were of unusual length as well as breadth. The *kayak* or canoe belonging to this establishment was carefully laid on the rocks close to the seaside, with the paddle and the man's mittens in readiness beside it. The timbers were entirely of wood, and covered as usual with seal-skin. Its length was nineteen feet seven inches, and its extreme breadth two feet; it was raised a little at each end, and the rim or gunwale of the circular hole in the middle was high, and made of whalebone. A handsome seal-skin was smoothly laid within as a seat, and the whole was sewn and put together with great neatness. The paddle was double, made of fir, and the ends of the blades tipped with bone, to prevent splitting.

‘ The fire-place in the tent consisted of three rough stones carelessly placed on end against one side, and they had several pots of *lapis ollaris*, for culinary purposes. These people seemed to us altogether more cleanly than any Esquimaux we had before seen, both in their persons and in the interior of their tent, in neither of which could we discover much of that rancid and pungent smell, which is in general so offensive to Europeans. One instance of their cleanliness which now occurred, deserves perhaps to be noticed, both because this is justly considered rather a rare quality among Esquimaux, as well as to show in what way they do sometimes exercise it. When leaving the tent, to return to our boats, I desired one of the seamen to tie the articles we had purchased into a single bundle, for the convenience of carrying them: but

the elder of the two male Esquimaux, who watched the man thus employed, would not permit it to be done without excluding a pot, which, as he explained by wiping the lamp-black off with one of his fingers, would soil a clean seal-skin jacket that formed part of the bundle.

‘Among the few domestic utensils we saw in the tent was the woman’s knife of the Greenlanders described by Crantz, and resembling, in its semi-circular shape, that used by shoe-makers in England. The most interesting article, however, was a kind of bowl exactly similar to that obtained by Captain Lyon from the natives of Hudson’s Strait, being hollowed out of the root of musk-ox’s horn. As soon as I took the cup in my hand, the boy who was our first companion, and had since been our constant attendant, pronounced the word *oomingmuk*, thus affording an additional confirmation to that obtained on the former voyage, of the musk-ox being the animal described by the natives of the west coast of Greenland, as having occasionally, though rarely, been seen in that country.

‘As soon as the Esquimaux became a little more familiar with us, they repeatedly asked for *sowik* (iron), in answer to which we gave them to understand that they must accompany us to our boats, if they wished to obtain any of this precious article. Accordingly, the whole group set off with us on our return, the males keeping up with us, and the women a short distance behind. The whole of the children carried bundles of the branches of ground willow, which we had just before seen them bring

in for their own use, and which they seemed to consider an article of barter that might be acceptable to us. As we returned, I noticed a quantity of the *ledum palustre*, and having plucked some of it, gave it to the boy to carry; after which, though he very much disliked its smell, he gathered every root of it that we came to, and deposited it at our tents. This lad was uncommonly quick and clever in comprehending our meaning, and seemed to possess a degree of good-humor and docility, which, on our short acquaintance, made him a great favorite among us.

‘ We had hitherto been much pleased with our new acquaintance, who were certainly a good-humored, decent sort of people. We therefore loaded them with presents, and endeavoured to amuse them by showing them the manner of rowing our boats, which were hauled up on the beach. While the men and children were occupied in observing this, the women were no less busily employed, near the tents, in pilfering and conveying into their boots, some of our cups, spoons, and other small articles, such as they could conveniently secrete. This they accomplished with so much dexterity, that no suspicion would have been excited of their dishonesty, had not Mr Sherer fortunately missed a cup which was required for supper. A general search being instituted in consequence, and the cargo of the women’s boots brought back to our tents, I directed all our presents to be likewise taken from the two offenders; and, dismissing the whole party with great appearance of indigna-

tion, thus put an end for the present to our communication with these people.'

After surveying a considerable extent of coast, the captain returned to the ships, which he found completely beset. They were extricated, however, and continued to explore the northern shores of Frozen Strait, sometimes beset and sometimes in motion. The appearance of the land was as hitherto described; the soil, the vegetable productions, and the animal kingdom were the same. There is so little variety in this part of the voyage, that it would be tiresome to repeat the details.

CHAPTER V.

Ice begins to make.—The Ships get into Winter Quarters.—Shrimps.—Foxes.
—A Theatre opened.—Northern Lights.—Esquimaux.

ON the 1st of October, rain fell, which immediately freezing, made the decks and ropes as smooth as glass. For several days the thermometer had been below the freezing point, and sometimes as low as -20° at night, which change, together with the altered aspect of the land, and the rapid formation of young ice near the shores, gave notice of the approach of winter. The commencement of this dreary season in these regions may, indeed, be dated from the time when the earth no longer receives and radiates heat enough to melt the snow which falls upon it.

On the 8th, the young ice on the surface began to give them warning that the navigation of those seas was nearly ended for the season. When the young ice has acquired the thickness of half an inch, and is of considerable extent, a ship must be stopped by it, unless favored by a strong and fair wind; and even when making progress, is not under control of the helmsman, depending mostly on the thickness of the ice on one bow or the other. Boats cannot be employed in such situations with much effect.

When to these difficulties were added the disadvantage of a temperature near zero, and twelve hours of daily darkness, Capt. Parry became convinced that it was expedient to place the ships in the most secure situation that could be found, rather than run the risk of being permanently detached from the land by attempting to gain the continent. Accordingly, a canal was sawed into a harbour on the south side of a small island, to which the name of Winter Island was given, and the ships were warped to their winter stations. Thus ended their operations for the season, after having explored a portion of coast six hundred miles in extent, one half of which belonged to the continent of America.

The arrangements for passing the winter comfortably were pretty much the same as those which had been made at Melville Island, with some improvements, suggested by former experience. The theatre was better fitted than before, and a school was established for the benefit of such of the crews as might wish to learn to read and write. The

lower deck of the *Fury* was fitted for a church, and the companies of both ships attended during the winter. The men were sent to walk on shore for exercise, whenever the weather was favorable; and finger-posts were erected in various parts of the island, to prevent them from losing their way.

Before the ice had entirely shut up the sea, great numbers of small shrimps (*cancer nugax*) were observed near the surface. When any meat was put overboard to thaw or soak, these insects fastened upon it with great avidity. A goose, left fortyeight hours in this situation, was dissected as neatly and thoroughly as the most experienced surgeon could have done it, nothing remaining but the bare bones. Our navigators took advantage of the hunger of these depredators to procure skeletons of small animals for anatomical specimens, by enclosing them in a net through which the shrimps could have access, but which prevented the loss of any of the bones when the cartilage was eaten.

Many white foxes were caught, in traps something like those called box-traps. It was remarked that when a southerly wind had blown the scent of the ships over the island, more were caught than at any other time. So numerous were they, that no less than fifteen were caught in a single trap in the space of four hours; one was no sooner taken out than another entered. Indeed they were so stupid, that, in several instances, those that escaped from the traps re-entered, and were captured as they had been before.

The harbour in which the ships were moored was

but an open roadstead, and they had some reason to fear that if the ice should get in motion during the winter, they might be forced on shore, or driven out to sea. On the 11th of November, it being the time of spring tides, a large crack was observed in the ice near the ships, which was found to extend a considerable distance outside them, rendering it probable that a complete separation might take place. Cables were run out, and every precaution was taken to prevent such an occurrence, and fortunately nothing occurred to cause farther apprehension.

On the 11th of December, the weather being tolerably clear, stars of the third magnitude were visible to the naked eye at forty minutes past eight, and those of the second magnitude till a quarter past nine, which may give some idea of the degree of light at this period. The twilight was, of course, very long, and the redness of the sun's rays might be seen more than three hours after his setting.

On the 13th, the thermometer fell to -31° , being the lowest temperature yet experienced. Rising on the 17th to -5° , the play of *The Poor Gentleman* was performed. On Christmas eve the theatre was again put in requisition, and the next day was celebrated to the utmost extent their means would allow. Among the luxuries of the Christmas dinner were a few joints of English roast beef, which had been preserved expressly for the occasion, the first and last ever eaten in Frozen Strait.

During the whole of this month, the displays of the *Aurora Borealis* were more frequent and splen-

did than they had before noticed, but we cannot by description convey any adequate idea of them. The health of the ships' companies was remarkably good, only one name being found on the sick list, and not the slightest symptom of scurvy had yet appeared. To increase the allowance of antiscorbutics, they adopted a regular system of raising mustard and cress, which the warmth of the ships enabled them to do on a larger scale than at Melville Island. A crop was produced once in ten days, and before the arrival of spring nearly an hundred pounds had been procured on board each vessel. When it is considered how complete a specific for the scurvy fresh vegetable substance is, this circumstance will not be thought unimportant.

The same occupations, that had employed them at Melville Island served to beguile the time this winter. Nothing material occurred till the first of February, unless the circumstance of seeing a white bear may be accounted so.

On the 1st of February, a number of Esquimaux were seen coming toward the ships over the ice, and the appearance of huts was discovered on the shore with a telescope. Captains Parry and Lyon, with three or four others, set out to meet the natives who were slowly advancing, to the number of twenty-five. As the officers advanced, they stood still, awaiting their approach. They had no arms, but carried only a few strips of whalebone, which they had brought for a peace-offering, and which the gentlemen immediately purchased for a few small nails and beads. There were several women and chil-

dren with the party, and the behaviour of all was quite peaceable and orderly. They were all handsomely dressed in deerskins, and some had double suits.

However quiet these savages were, they did not exhibit the slightest signs of apprehension or distrust. As soon as some understanding was established, the officers expressed a wish to visit their huts, and the Esquimaux readily complying, they all set out together. The savages were greatly astonished on the way to see a large dog, belonging to the whites, fetch and carry; and the children could scarcely contain their joy when Capt. Lyon gave them a stick to throw, and the dog brought it back to them. An infirm old man, who supported himself with a staff, which he much needed, was left behind by his companions, who took no notice of his infirmities, but left him to find his way as he might, without reluctance or scruple.

When it is remembered that these habitations were fully within sight of the ships, and how many were continually on the look-out for anything that could afford variety or interest, their surprise may in some degree be imagined at finding an establishment of five huts, with canoes, sledges, dogs, and above sixty men, women, and children, as regularly and, to all appearance, as permanently fixed, as if they had occupied the same spot for the whole winter. If the first view of the exterior of this little village was such as to create astonishment, that feeling was in no small degree heightened, on accepting the invitation soon given, to enter these

extraordinary houses, in the construction of which no material was used but snow and ice. After creeping through two low passages, having each its arched door-way, they came to a small circular apartment, of which the roof was a perfect arched dome. From this three door-ways, also arched and of larger dimensions than the outer ones, led into as many inhabited apartments, one on each side, and the other facing them as they entered. The interior of these presented a scene no less novel than interesting. The women were seated on the beds at the sides of the huts, each having her little fire-place or lamp, with all her domestic utensils about her; the children crept behind their mothers, and the dogs, (except the female ones, which were indulged with a part of the beds,) slunk out in dismay. The construction of this inhabited part of the huts was similar to that of the outer apartment, being a dome formed by separate blocks of snow, laid with great regularity and no small art, each being cut into the shape requisite to form a substantial arch, from seven to eight feet high in the centre, and having no support whatever but what this principle of building supplied. We shall not here further describe the peculiarities of these curious edifices, remarking only that a cheerful and sufficient light was admitted to them by a circular window of ice neatly fitted into the roof of each apartment.

They found our new acquaintance as desirous of pleasing them, as they were ready to be pleased; so that they were soon on good terms with them

all. While the visitors were engaged in examining every part of their huts, their whole behaviour was in the highest degree orderly, respectful and good-humored. They eagerly received the various articles that were given them, either in exchange for their own commodities, or as presents, but on no occasion importuned for anything, nor did the well-known sound of 'pilletay' once escape from them. There was also great reason to believe that these people possessed, in no ordinary degree, the quality of honesty. If the whites dropped a glove or a handkerchief without knowing it, they would immediately direct their attention to it by pointing; and if the owner had left the hut before they discovered it, would run out after him to return it.

CHAPTER VI.

The Esquimaux visit the Ships.—Wolves.—More Particulars relating to the Esquimaux.—Manner of constructing Snow Huts.

AFTER remaining with the Esquimaux a couple of hours, and proposing to spend the following day amongst them, the officers set out on their return to the ships. Being desirous of trying their disposition to part with their children, Capt. Parry proposed to buy a fine lad, named *Toolooak*, for the very valuable consideration of a handsome butcher's knife. His father, apparently understanding the Captain's meaning, joyfully accepted the knife, and the boy ran into

the hut to fetch his mittens, which seemed to be all that he cared for in leaving his home. He then set off with the Captain, in high spirits, and at first assisted in drawing the sledge they had purchased to carry their things; but as he began, by their additional signs, more clearly to comprehend their true meaning, he gradually relaxed in his zeal to accompany the party; and being afterwards overtaken by a number of his companions, he took an opportunity to slink off among some hummocks of ice, so that when they arrived on board, Toolooak was missing.

On reaching the ships, these people expressed much less surprise and curiosity than might naturally have been expected on their first visit, which may, perhaps, in some measure, be attributed to their being in reality a less noisy kind of people than most of the Esquimaux to whom the whites had before been accustomed. Quiet and orderly, however, as they were disposed to be, this first visit showed them to be as fond of merriment as their countrymen are usually considered; for, on Capt. Lyon's ordering his fiddler up on the Hecla's deck, they danced with the men for an hour, and then returned in high glee and good humor to their huts.

During their absence in the morning, a flock of thirteen wolves, the first yet seen, crossed the ice in the bay from the direction of the huts, and passed near the ships. These animals had accompanied or closely followed the Esquimaux on their journey to the island the preceding day; and they proved the most troublesome part of their *suite*.

They so much resemble the Esquimaux dogs, that, had it not been for some doubt among the officers who had seen them, whether they were so or not, and the consequent fear of doing these poor people an irreparable injury, they might have killed most of them the same evening, for they came boldly to look for food within a few yards of the Fury, and remained there for some time.

At an early hour on the 2d, Capt. Parry set out with a large party on an excursion to the huts. The natives received them with great cordiality, though with somewhat more noisy expressions of pleasure than before ; and they soon began a more minute examination of their habitations and furniture, in which they readily assisted, except that they always sat very closely on the deer-skins which composed their beds, under which were stowed such articles as they were least willing or able to dispose of. They sold, however, a great number of their things without reluctance ; and it was indeed astonishing to see with what eagerness they would, for the mere sake of change and variety, barter some of their most indispensable articles for the veriest trifles. For instance, a single sewing needle, of which they possessed abundance not much inferior to those of the whites, procured from them a large well-sharpened *panna*, or man's knife, made of stout iron, for which, in point of absolute utility, a hundred needles would not have been a fair equivalent. Various other instances of the same kind occurred, by which, indeed, they were not ultimately losers, though they certainly would have been so, had the intercourse ended here.

The party dined in the huts, and the Esquimaux gladly partook of their biscuit and meat, and even of a little wine, which however they did not relish. The Captain returned on board about sunset, much gratified with the interesting day he had passed; having laid the foundation of that perfect confidence and good understanding which, with little or no interruption, afterwards subsisted between the ships' companies and their new acquaintance.

On the morning of the 3d, a number of the Esquimaux were seen going over the ice, seal hunting, and they returned with four seals. It was found that even at this rigorous season they were dependent on their daily exertions. On the 4th, some of them came to the ships, and were persuaded to build a snow hut, for the amusement and information of the officers. The way these edifices are constructed is as follows. The work is commenced by cutting from a drift of hard and compact snow a number of oblong slabs, six or seven inches thick and about two feet in length, and laying them edgewise on a level spot, also covered with snow, in a circular form and of a diameter from eight to fifteen feet, proportioned to the number of occupants the hut is to contain. Upon this foundation is laid a second tier of the same kind, but with the pieces inclining a little inwards, and made to fit closely to the lower slabs and to each other, by running a knife adroitly along the under part and sides. The top of this tier is now prepared for the reception of a third, by squaring it off smoothly with a knife, all which is dexterously performed by one

man standing within the circle and receiving the blocks of snow from those employed in cutting them without. When the wall has attained a height of four or five feet, it leans so much inward as to appear as if about to tumble every moment, but the workmen still fearlessly lay their blocks of snow upon it, until it is too high any longer to furnish the materials to the builder in this manner. Of this he gives notice by cutting a hole close to the ground in that part where the door is intended to be, which is near the south side, and through this the snow is now passed. Thus they continue till they have brought the sides nearly to meet in a perfect and well-constructed dome, sometimes nine or ten feet high in the centre; and this they take considerable care in finishing, by fitting the last block or *key-stone* very nicely in the centre, dropping it into its place from the outside, though it is still done by the man within. The people outside are in the meantime occupied in throwing up snow with the *pooalleray*, or snow-shovel, and in stuffing in little wedges of snow where holes have been accidentally left.

The builder next proceeds to let himself out by enlarging the proposed door-way into the form of a Gothic arch three feet high, and two feet and a half wide at the bottom, communicating with which they construct two passages, each from ten to twelve feet long and from four to five feet in height, the lowest being that next the hut. The roofs of these passages are sometimes arched, but more generally made flat by slabs laid on horizontally. In first

digging the snow for building the hut, they take it principally from the part where the passages are to be made, which purposely brings the floor of the latter considerably lower than that of the hut, but in no part do they dig till the bare ground appears.

The work just described completes the walls of a hut, if a single apartment only be required; but if, on account of relationship, or from any other cause, several families are to reside under one roof, the passages are made common to all, and the first apartment (in that case made smaller) forms a kind of anti-chamber, from which you go through an arched door-way, five feet high, into the inhabited apartments. When there are three of these, which is generally the case, the whole building, with its adjacent passages, forms a tolerably regular cross.

For the admission of light into the huts, a round hole is cut on one side of the roof of each apartment, and a circular plate of ice, three or four inches thick and two feet in diameter, let into it. The light is soft and pleasant, like that transmitted through ground glass, and is quite sufficient for every purpose. When after some time these edifices become surrounded by drift, it is only by the windows, as I have before remarked, that they could be recognised as human habitations. It may perhaps then be imagined how singular is their external appearance at night, when they discover themselves only by a circular disk of light transmitted through the windows from the lamps within.

The next thing to be done is to raise a bank of snow two and a half feet high, all round the interior

of each apartment, except on the side next the door. This bank, which is neatly squared off, forms their beds and fire-place, the former occupying the sides and the latter the end opposite the door. The passage left open up to the fire-place is between three and four feet wide. The beds are arranged by first covering the snow with a quantity of small stones, over which are laid their paddles, tent-poles, and some blades of whalebone: above these they place a number of little pieces of net-work, made of thin slips of whalebone, and lastly a quantity of twigs of birch and of the *andromeda tetragona*. Their deer-skins, which are very numerous, can now be spread without risk of their touching the snow; and such a bed is capable of affording not merely a comfort, but luxurious repose, in spite of the rigor of the climate. The skins thus used as blankets are made of a large size, and bordered, like some of the jackets, with a fringe of long narrow slips of leather, in which state a blanket is called *keipik*.

The fire belonging to each family consists of a single lamp, or shallow vessel of *lapis ollaris*, its form being the lesser segment of a circle. The wick, composed of dry moss rubbed between the hands till it is quite inflammable, is disposed along the edge of the lamp on the straight side, and a greater or smaller quantity lighted according to the heat required or the fuel that can be afforded. When the whole length of this, which is sometimes above eighteen inches, is kindled, it affords a most brilliant and beautiful light without any perceptible

smoke or any offensive smell. The lamp is made to supply itself with oil, by suspending a long thin slice of whale, seal, or walrus blubber near the flame, the warmth of which causes the oil to drip into the vessel until the whole is extracted. Immediately over the lamp is fixed a rude and rickety frame-work of wood, from which their pots are suspended, and serving also to sustain a large hoop of bone, having a net stretched tight within it. This contrivance, called *Innetat*, is intended for the reception of any wet things, and is usually loaded with boots, shoes, and mittens.

The fire-place just described as situated at the upper end of the apartment, has always two lamps facing different ways, one for each family occupying the corresponding bed-place. There is frequently also a smaller and less-pretending establishment on the same model—lamp, pot, net and all—in one of the corners next the door; for one apartment sometimes contains three families, which are always closely related, and no married woman, or even a widow without children, is without her separate fire-place.

With all the lamps lighted and the hut full of people and dogs, a thermometer placed on the net over the fire indicated a temperature of 38° ; when removed two or three feet from this situation, it fell to 31° , and placed close to the wall stood at 23° , the temperature of the open air at the time being 25° below *zero*. A greater degree of warmth than this produces extreme inconvenience, by the dropping from the roofs. This they endeavour to obviate,

by applying a little piece of snow to the place from which a drop proceeds, and this adhering, is for a short time an effectual remedy; but for several weeks in the spring, when the weather is too warm for these edifices, and still too cold for tents, they suffer much on this account.

From the celerity with which the Esquimaux performed these operations, the surprise of the officers, at the sudden appearance of the snow village ceased, as they now saw that two or three hours were more than sufficient to complete the whole establishment, as they had at first found it.

The operatives were taken on board and derived great amusement from an organ, and from anything in the shape of music, singing, or dancing,—of all which they are remarkably fond. Nor can we here omit a striking instance of the honesty of these people, which occurred this day. Some of the gentlemen of the *Hecla* had purchased two of their dogs, which had the preceding evening made their escape and returned to the huts. After the departure of the Esquimaux this day, they were surprised to find that they had left two dogs carefully tied up on board the *Fury*, which on inquiry proved to be the animals in question, and which had been thus faithfully restored to their rightful owners.

CHAPTER VII.

Esquimaux.—Musical Concert.—An Esquimaux whipped for Theft.—Starvation.—Captain Parry accompanies a Sealing Party.

ON the 5th, a number of the natives came on board according to promise to rebuild the hut in a more substantial manner, and to put a plate of ice into the roof as a window, which they did with great quickness as well as care, several of the women cheerfully assisting in the labor. The men seemed to take no small pride in showing in how expeditious and workman-like a manner they could perform this; and the hut with its outer passage was soon completed. From this time they were in the constant habit of coming freely to the ships; and such as it was not always convenient to admit, usually found very profitable employment in examining the heaps of ashes, sand, and other rubbish on the outside, where their trouble was well repaid by picking up small scraps of tin or iron. All that they found in this manner they were allowed to consider their lawful property; but the officers were very particular in preventing their handling anything on board without permission.

The wolves had now begun to do some damage; for not even the sails that were fastened round the house and observatory could escape their ravenous fangs, and they had thus in the course of a single night much injured two studding-sails. Traps were set for them on the ice; and also large shark-hooks

secured with chains and baited with meat; but the former they entered and destroyed, and the latter were always found broken or bent, without securing the depredators. These animals were indeed so hungry and fearless as to take away some of the Esquimaux dogs in a snow-house near the Hecla's stern, though the men were at the time within a few yards of them.

From the circumstance of Captains Lyon and Parry having accidentally gone into different huts on their first visits to the village, (for with this name we believe we must venture to dignify the united abodes of more than sixty human beings,) particular individuals among the Esquimaux had already in a manner attached themselves to each of them.

On the 7th, Capt. Parry paid another visit to the huts, where he found scarcely anybody but women and children, all of the men, with the exception of the two oldest, having gone on a sealing excursion to the northeastern side of the island. One of the women named *Iligliuk*, a sister of the lad Toolooak, who favored him with a song, had a remarkably soft voice, an excellent ear, and a great fondness for singing; for there was scarcely any stopping her when she had once begun. The Captains had, on their first visit to the ships, remarked this trait in *Iligliuk*'s disposition, when she was listening for the first time to the sound of the organ, of which she seemed never to have enough; and almost every day she now began to display some symptom of that superiority of understanding for which she was remarkably distinguished. A

few of the women learned several of the visitors' names, and we believe all thought them Angekoks or sorcerers of a very superior class, when they repeated to them all round, by the assistance of books, the names of all their husbands, obtained on board the preceding day. On the way back to the ships, they saw a party of them, with their dogs, returning over the hill from the northeastward; and afterwards met another of eight or ten who had walked round by the southeast point on the ice, all alike unsuccessful, after being out in the wind for six hours with the thermometer from 18 to 22 degrees below *zero*. Thus hardly did these people obtain their daily subsistence at this severe season of the year!

On the 8th, the ships were visited by a musical party of females, who had been specially invited for the purpose. The officers assembled in the *Fury's* cabin to hear them, and the notes of their songs were taken down. They were in their turn entertained with a concert of flutes and violins, with which they were delighted to extasy. It would appear that these people have generally a great musical susceptibility, which is not the case with the hunting savages of the new continent.

Finding that these poor creatures were really in want of food, Captain Parry supplied them with a few pounds of bread dust, which, however hungry themselves, they did not eat, but took home to their children.

As yet none of the Esquimaux had learned to beg, with the exception of one old man. He had

become extremely troublesome ; and one day stealing a nail, Captain Parry took advantage of the circumstance, which he magnified into a grave offence, to get rid of him. Calling all the other Esquimaux on board together, and having in their presence expressed the utmost indignation, he turned the offender out of the ship in disgrace. Among those present were the son and daughter of the culprit, who did not in the slightest degree appear to consider themselves implicated in their father's offence, or concerned in his shame.

The Esquimaux hunted diligently for seals, but having no success, they were reduced to great extremities. It must be remembered that any failure in sealing involves them in a double calamity, for it not only deprives them of food, but of fuel for their lamps. When this is the case, not to mention the absence of warmth and light from their huts, they are also destitute of the means of melting snow for drink, and can only quench their thirst by eating the snow, which we know by experience to be a wretched resource. In consequence of this privation the quantity of water drank by those who visited the ships was astonishing ; the coppers could scarcely supply the demand. One of them drank a gallon in less than two hours. Captain Parry humanely provided them with food, but this did not hinder them from devouring the raw, frozen carcass of a wolf, which had been shot from the Hecla. In all this suffering it was pleasing to observe that none of them would touch a morsel till they had first fed their hungry little ones.

On the 11th the thermometer stood at from -26° to -30° . Notwithstanding the rigor of the weather, some of the Esquimaux came on board; indeed no degree of cold seemed sufficient to confine these people at home.

In the morning of the 12th, two of the savages came on board the Hecla. The stage and scenery had just been set up, and they were directed to invite their fellows to come and see it. Coming three or four hours before 'John Bull' was to commence, they began to grow impatient, especially after dark, when the candles were brought, and the men returned to their huts. They remained long enough, however, to have a peep at *Mrs* Brulgrudery, whose dress they very eagerly examined, when they were told that it was a *kabloona noodlee-o*, or white woman.

On the next day, our savage friends were so fortunate as to kill three seals, an event that created an exceeding great joy in the village. There was a general outcry; the women hurried to the doors of the huts, and the children rushed to the beach to assist the men to drag their prizes along. One of these urchins, to complete the triumph, threw himself upon a seal, and clinging fast to it, was thus dragged to the huts. Each woman brought her cooking-pot to the wigwam where the animal was dissected in order to get a portion of the meat and blubber. This evening a wolf, being the third taken, was entrapped.

Early on the morning of the 16th, Capt. Parry joined a party of Esquimaux, who were going in

quest of seals. Having attained a suitable distance from the shore, they separated into two or three different parties stationed at the distance of half a mile from each other, along the edge of the floe, beyond which, to the eastward, there was clear water as far as could be seen for the frost smoke.

The party Capt. Parry joined were seated on a high hummock of ice, looking out for seals, with their spears in their hands. Suddenly, one of them, named Okotook, sprung up, and started along the edge of the ice, without giving the least intimation of his intentions. His companions, however, seemed so well aware of them, that they immediately followed him, and the Captain did the same; the whole party walking very fast, and the native looking attentively seaward for seals. After being thus engaged for more than an hour, Captain Parry judged, from the motions of a party at a distance, that they had a seal in view. As he approached them, Okotook began to be apprehensive that the Captain, who did not understand the matter, might spoil the sport. To prevent this, he did the most civil thing he could imagine, which was to send his companions one by one to the spot, while he remained himself with the Captain, and took care to keep him at a distance whence he could see the proceedings without alarming the animal they pursued. The other Esquimaux, forming one party, disposed themselves in single file so as to present as small a front as possible in the direction in which they were going, and in this manner they crept cautiously toward the margin of the floe. On a

sudden they all stooped quite low, to hide themselves, and so continued a quarter of an hour, during which they arranged their lines and spears, and then when the seal was intercepted from their view, gained a few paces upon him in the same cautious manner as before. When they had been thus occupied a full hour, the seal, which had been lying upon the ice, plunged into the water, and they gave up the chase. All this time Okotook could scarcely restrain his impatience, which could only be diminished by permitting him to look through a spy-glass. When he saw for what it was intended, he had no words to express his surprise and satisfaction.

CHAPTER VIII.

Danger of the Seal Hunters.—A Seal Hole.—Manner of Watching Seal Holes.—Manner of Catching Seals and Walrusses.—Another Instance of Theft.—Ferocity of the Wolf.—Esquimaux Dwellings.—Seals killed.—Seal Butchery.—Seals.

As soon as the party had given up the seal they had been watching, they turned their steps homeward, whither, it being in the direction of the ships, Captain Parry was not sorry to accompany them. They were at this time three or four miles from the vessels, and full a mile and a half from the shore. In the open water beyond the floe the tide was running at the rate of two miles an hour, and a sheet as substantial as that on which they stood had

been carried away by the stream. Capt. Parry was not without some apprehension that they might be detached from the shore, and carried to sea, an accident which has often happened to Esquimaux, and has probably often befallen them when none survived to tell the tale.

As they returned toward the shore, they came to a small rising on the level surface of the ice, not larger than a mole hill, at which one of the Esquimaux instantly stopped. His companions called Capt. Parry away, explaining that what he saw was the work of a seal, and that it was probable the animal would finish the hole and come upon the ice, in which case the man who had stopped would try to kill it. The Captain watched him for half an hour, and observed him frequently putting his ear to the ice, as if in the act of listening for the seal, but without otherwise changing his posture. He was not successful.

It, however, an Esquimaux has strong reason to believe that a seal is at work beneath, he attaches himself to the spot, and seldom leaves it till he has killed the animal. For this purpose, he builds a wall of snow about four feet in height, to shelter him from the wind, and, seating himself under the lee of it, deposits his spear, lines, and other implements upon several little forked sticks inserted into the snow, in order to prevent the smallest noise being made in moving them when wanted. But the most curious precaution to the same effect consists in tying his own knees together with a thong, so securely as to prevent any rustling of his clothes,

which might otherwise alarm the animal. In this situation, a man will sit quietly sometimes for hours together, attentively listening to any noise made by the seal, and sometimes using the *keip-kuttuk*, an instrument hereafter to be described, in order to ascertain whether the animal is still at work below. When he supposes the hole to be nearly completed, he cautiously lifts his spear, to which the line has been previously attached, and as soon as the blowing of the seal is distinctly heard, and the ice consequently very thin, he drives it into him with the force of both arms, and then cuts away with his *panna* the remaining crust of ice, to enable him to repeat the wounds and get him out. The *neitiek* is the only seal killed in this manner, and being the smallest, is held while struggling, either simply by hand, or by putting the line round a spear with the point stuck into the ice. For the *oguke*, the line is passed round the man's leg or arm; and for a walrus, round his body, his feet being at the same time firmly set against a hummock of ice, in which position these people can from habit hold against a very heavy strain. Boys of fourteen or fifteen years of age consider themselves equal to the killing of a *neitiek*, but it requires a full-grown person to master either of the larger animals.

On the 17th, a number of the Esquimaux coming to the ships during divine service, were not admitted, and they were given to understand that they must refrain from visiting every seventh day. They acquiesced cheerfully in this arrangement; indeed, it is difficult to conceive greater docility than they evinced on all occasions.

On the 20th, an Esquimaux woman stole one of the cooper's tools, which was the second instance of theft observed among these people. It may be doubted if the whites were not as much to blame as the Indians, for leaving temptations in their way, which it was scarcely possible they should withstand; nevertheless, Captain Parry thought it expedient to go through the same ceremony as on the former occasion, and dismissed the women with every manifestation of indignation.

The ships' companies had more than one opportunity to observe the extreme ferocity of the wolves. One of them being caught in a trap, a party of the officers went to secure him, and fired two balls into the trap at once, to despatch him. Finding that after this he continued to bite at a sword that was thrust into the trap, a third shot was fired at him. The trap was then opened sufficiently to tie his hind legs together, after which he was pulled out. As soon as he was clear of the enclosure, he sprung furiously at the throat of one of the officers, and would have done him a serious mischief, had he not, in his turn, seized the animal firmly by the neck, squeezing him with both hands with all his force. This made the wolf relinquish his first attempt, and the officer only suffered by one bite in his arm and another in his knee. The wolf then ran and escaped, though two of his legs were tied together. The following day he was found dead, three quarters of a mile from the ships.

At another time, an officer observing an Esquimaux dog attacked by several wolves, went to the

spot with his gun, but arrived too late. The wolves had made so quick a division of their prey, that though he arrived in a few minutes, only one of the hind legs remained, each wolf having ran off with his share.

Captain Lyon remarked that an eclipse of the sun, which took place on the 20th, created great consternation among the Esquimaux. Two of them were found on the ice, lying on their faces; but their solution of the phenomenon could not be ascertained.

On the 23d, Captain Parry again visited the Esquimaux huts. They had changed their appearance since his first visit: the roofs were blackened with the smoke of the lamps; and the warmth had in most parts given them a glazed and honey-combed surface; indeed, the whole of the walls had become much thinner by thawing, so that the light was more plainly visible through them. The snow also, on which the lamps stood, was considerably worn away, so as to destroy, in a great measure, the regularity of the original plan of construction. To these changes might be added that of a vast quantity of blood and oil, which now defaced the purity of the snowy floor, and emitted effluvia not very agreeable to European nostrils; so that, upon the whole, it may be imagined that the first impressions of the comfort and cleanliness of these habitations were more favorable than their present state was calculated to excite.

To the original apartments they had now also added various smaller places for stores, communicating with the huts from within, and looking some-

thing like our óvens, though without any door to them. In some of these they deposited their upper jackets, which they usually take off in coming into their huts, as we do a great coat; while in smaller ones, like little shelves in a recess, they kept various articles of their Kabloona riches. These and similar alterations and additions they were constantly making throughout the winter; for their inexhaustible materials being always at hand, it required but little time and labor to adopt any arrangement that might suit their convenience.

After distributing a number of presents in the first four huts, Capt. Parry found, on entering the last, that an Esquimaux had been successful in bringing in a seal, over which two elderly women were standing, armed with large knives, their hands and faces besmeared with blood, and delight and exultation depicted on their countenances. They had just performed the first operation of dividing the animal into two parts, and thus laying open the intestines. These being taken out, and all the blood carefully baled up and put into the *ootkooseek*, or cooking-pot, over the fire, they separated the head and flippers from the carcass, and then divided the ribs. All the loose scraps were put into the pot for immediate use, except such as the two butchers now and then crammed into their mouths, or distributed to the numerous and eager bystanders for still more immediate consumption. Of these morsels the children came in for no small share, every little urchin that could find its way to the slaughter-house, running eagerly in, and, between the legs of

the men and women, presenting its mouth for a large lump of raw flesh, just as an English child of the same age might do for a piece of sugar-candy. Every now and then also a dog would make his way towards the reeking carcass, and when in the act of seizing upon some delicate part, was sent off yelping by a heavy blow with the handles of the knives. When all the flesh is disposed of, for a portion of which each of the women from the other huts usually brings her ootkooseek, the blubber still remains attached to the skin, from which it is separated the last; and the business being now completed, the two parts of the hide are rolled up and laid by, together with the store of flesh and blubber. During the dissection of their seals, they have a curious custom of sticking a thin filament of skin, or of some part of the intestines, upon the foreheads of the boys, who are themselves extremely fond of it, it being intended, as was afterwards ascertained, to make them fortunate seal-catchers.

The seals which they take during the winter are of two kinds, the *neitiek*, or small seal (*phoca hispida*), and the *oguke*, or large seal (*phoca barbata*). These and the *ei-u-ek*, or walrus, constitute their means of subsistence at this season; but, on this particular part of the coast, the latter are not very abundant, and they chiefly catch the *neitiek*. The animal Capt. Parry had now seen dissected was of that kind, and with young at the time. A small one taken out of it had a beautiful skin, which, both in softness and color, very much resembled raw silk; but no inducement could make the owner part with it, he having destined it for that night's supper.

CHAPTER IX.

Health of the Esquimaux.—Their envious Disposition.—Captain Lyon's Journey.—Removal of Esquimaux, &c.—Captain Parry lodges with the Savages.

ALMOST the whole of the Esquimaux were now affected with violent colds and coughs, occasioned by a considerable thawing that had lately taken place in their huts, so as to wet their clothes and bedding; but they had as yet experienced no great increase of temperature. From the nature of their habitations, however, their comfort was greater, and their chance of health better, when the cold was more severe. On this account they began to make fresh alterations in these curious dwelling-places, either by building the former apartments two or three feet higher, or adding others, that they might be less crowded. In building a higher hut they constructed it over, and, as it were, concentric with the old one, which was then removed from within. It is curious to consider that, in all these alterations, the object kept in view was *coolness*, and this in houses formed of snow!

This month (February) closed with the thermometer at -32° , and though the sun had attained a meridian altitude of nearly sixteen degrees, and remained above the horizon ten hours every day, no sensible effect was as yet produced on the temperature. The uniform white surface of the snow, on which the sun's rays have at this season to act,

or rather leaving them nothing to act upon, is much against their first efforts to produce a thaw.

Captain Parry had communicated to an Esquimaux named Ayoket, his intention to send a party to the northward in the spring; and Captain Lyon had displayed to him all the charms of a brightly polished brass kettle, of greater magnitude than had perhaps ever entered into an Esquimaux imagination, as an inducement among various others for him to accompany the Kabloonas in their excursion. The prospect of such riches was a temptation almost irresistible; but enterprise is not the characteristic of an Esquimaux, and Ayoket, the Captain soon began to perceive, had no fancy for the proposed trip, which all his friends persisted in saying could never be accomplished. This was evidently to be attributed, in no small degree, to jealousy of any one individual among them being thus selected; and the brass kettle was speedily the means of increasing the distance to 'Iligliuk's country' from sixteen to twentyfour days' journey. It had long, indeed, been observed that this feeling of jealousy was easily excited among these people; but, what is extraordinary, it never displayed itself (as is most usual) among themselves, but was entirely vented upon the whites, who were, though innocently, the authors of it. As an instance of this, a man of the name of *Karretok* refused to take from Capt. Parry a strong and useful pair of scissors, as a present, because, as he did not hesitate to say, the Captain had given Okotook a pike, which was *more* valuable. To show him that this temper was not likely

to produce anything to his advantage, Capt. Parry took back the scissors, and, having sent him away, went to dinner. Going accidentally on deck an hour afterwards, he found Karretok still on board, who, having had time to reflect on his folly, now came with a smiling face, and begged hard for the scissors, which, of course, he did not get. Many similar instances occurred.

To this discouragement on the part of his friends, was added on that of Ayoket the same wavering and inconstant disposition which most other savages possess, rendering it impossible to place any dependence on his promises and intentions for two hours together. Indeed the more the scheme was pressed upon his attention, and the more he saw of the actual preparations for the journey, the less doubtful his intentions became; and arrangements were therefore made for completing the party without him. For the reasons now given, it was equally impossible ever to direct the attention of the Esquimaux, with any hope of success, to a scheme of their conveying letters to the Hudson's Bay settlements.

On the 15th, at seven A. M., Capt. Lyon and his party left the ship; the thermometer being as high as zero, and a breeze blowing, accompanied by a considerable drift of snow. From the very hour of his departure the thermometer fell rapidly, and the wind increased; till at midnight the mercury was at -32° , and a hard gale blew from the northwest. It proved one of the most inclement possible nights for persons to be exposed in, and serious appre-

hensions were entertained for the safety of the travellers. The wind and drift increased the next day, and the thermometer rose no higher than -26° . Nevertheless, Capt. Lyon and his party returned safely on board. They had suffered dreadfully; the faces of several were severely frost-bitten, and they had had great difficulty in finding their way to the ships. Those only who have been in similar distress can imagine their joy on gaining a shelter. The continuance of this weather brought the Esquimaux to actual starvation, and they came to the vessels and begged for food with more than usual earnestness. We hardly need say that their call was heard.

On the 2d of April, a thin sheet of bay ice, several miles square, had formed on the sea, where, for two or three days past there had been open water. This was occasioned by the absence of wind, and by the occurrence of neap tides, rather than from severe cold, the thermometer seldom falling below -6° or -7° . The wind setting in, the main body of ice began to move toward the shore, and forced the new floe before it, squeezing it into innumerable hummocks, which, being presently cemented together, gave an example of the manner in which floes full of hummocks are produced.

Early in the morning the Esquimaux were observed to be in motion about the huts, and several sledges, drawn by dogs, went off to the westward. On going to the village, it was found that one-half of the people had quitted their late habitations, taking with them every article of their property, and had

gone over the ice, in quest of more abundant food. The wretched appearance which the interior of the huts now presented baffles all description. In each of the larger ones some of the apartments were either wholly or in part deserted, the very snow which composed the beds and fire-places having been turned up, that no article might be left behind. Even the bare walls, whose original color was scarcely perceptible for lamp-black, blood, and other filth, were not left perfect, large holes having been made in the sides and roofs, for the convenience of handing out the goods and chattels. The sight of a deserted habitation is at all times calculated to excite in the mind a sensation of dreariness and desolation, especially when we have lately seen it filled with cheerful inhabitants; but the feeling is even heightened rather than diminished when a small portion of these inhabitants remain behind, to endure the wretchedness which such a scene exhibits. This was now the case at the village, where, though the remaining tenants of each hut had combined to occupy one of the apartments, a great part of the bed-places were still bare, and the wind and drift blowing in through the holes which they had not yet taken the trouble to stop up. An old man, Hikkeiera, and his wife occupied a hut by themselves, without any lamp, or a single ounce of meat belonging to them; while three small skins, on which the former was lying, were all that they possessed in the way of blankets. Upon the whole, a more miserable spectacle was never seen; and it seemed a charity to hope that a violent and constant

cough, with which the old man was afflicted, would speedily combine with his age and infirmities to release him from his present sufferings. Yet in the midst of all this he was even cheerful, nor was there a gloomy countenance to be seen at the village. Almost all the men were out; and some of them had been led so far to sea upon the floating and detached masses of ice in pursuit of walruses, that Capt. Lyon, who observed their situation from the ships, had it in contemplation, in the course of the evening, to launch one of the small boats to go to their assistance. They seemed, however, to entertain no apprehension themselves, from a confidence, perhaps, that the southeast wind might be depended upon for keeping the ice close home upon the shore. It is certain, notwithstanding, that no degree of precaution, nor any knowledge of the winds and tides, can render this otherwise than a most perilous mode of obtaining subsistence; and it was impossible, therefore, not to admire the fearlessness as well as dexterity with which the Esquimaux invariably pursued it.

After giving the women some small presents, Capt. Parry told them that he intended lodging in the huts that night. It is a remarkable trait in the character of these people, that they thank a stranger heartily for this, as well as for eating any of their food, but when they receive the like hospitality they show not the smallest thankfulness. At a wish expressed by Capt. Parry, all the females, not excepting the oldest, assembled to entertain him with a concert. Neither their want of food and

fuel, nor the uncertainty of obtaining any that night, could deprive these poor creatures of that cheerfulness which seems their most prominent characteristic.

CHAPTER X.

Particulars respecting the Esquimaux.—Dissection of the Seal.—Preparations for Departure.—Behaviour of a sick Savage.

THE night proved thick, with snow, and as dangerous and disagreeable for persons adrift on floating ice as can well be imagined. If the women, however, spoke of their husbands, it was not with concern, but simply to hope they might be successful. The singing party had just broken up, when it was announced by the children that the men had killed something upon the ice. The only two men left at home instantly put on their outer jackets, harnessed their dogs, and set off to assist in bringing home the game, while the women remained behind in anxious suspense. At last, one of the men returned with the news that two walruses had been taken, and brought with him as large a portion of the flesh as he could drag over the snow. The females became frantic; a general shout of joy was heard all over the village; they ran to each others' huts to communicate the intelligence, and hugged one another in an extasy of delight. When the first burst of joy had subsided, they repaired,

one by one, to the apartment where the first fruits of the hunt had been conveyed. Here they obtained enough blubber to light all their lamps, and a little meat for their children and themselves. Fresh loads arrived, mostly brought by dogs, and the rest by the men, who each dragged home his separate portion.

Every lamp was soon swimming with oil; the huts exhibited a blaze of light; and never was there a scene of more joyous festivity than while the operation of cutting up the walruses continued. One of the women gave up her bed to Capt. Parry, and contented herself with dozing away the night in an upright posture. He woke often in the night, and always found some of the Esquimaux eating. Some of them were thus incessantly employed more than three hours. Indeed, the quantity of food they contrive to devour almost exceeds belief. Long before morning the men again departed to renew their labors, not having slept more than two or three hours, thus proving that the Esquimaux do not, like the red Indians, give themselves up to sloth in seasons of plenty, but are willing to take advantage of every favorable opportunity. It is certain that were these people less gluttonous (for they do not waste much) they would seldom know the want of food, even at the most inclement seasons. On a second visit to some of the huts Capt. Parry had an opportunity of seeing a seal dissected, which was a very filthy operation. An old woman was the mistress of the ceremony, and was presently up to the elbows in blood and oil.

Before a knife is put into the animal, as it lies on its back, they pour a little water into its mouth, and touch each flipper and the middle of the belly with a little lamp-black and oil, taken from the under part of the lamp. What benefit was expected from this preparatory ceremony is not known, but it was done with a degree of superstitious care and seriousness, that bespoke its indispensable importance. As soon as this dirty operation was at an end, during which the numerous bystanders amused themselves in chewing the intestines of the seal, the strangers retired to their own huts, each bearing a small portion of the flesh and blubber, while the hosts enjoyed a hearty meal of boiled meat and hot gravy soup. A small boy ate at least three pounds of solid meat in the first three hours after the Captain's arrival at the huts, besides a tolerable proportion of soup, all which his mother gave him whenever he asked it, without the smallest remark of any kind.

The conversation happened to fall upon the red Indians, a people none of these Esquimaux had ever seen, but with whose ferocity and hostility to their own nation they were well acquainted by report. When the Captain related to them the massacre of the Esquimaux recorded by Hearne, and gave them to understand that the Indians spared neither age nor sex, it seemed to chill them with horror.

By the eleventh, the ships' companies began to make some show of equipping the ships for sea, though there was, as yet, but little prospect of a

speedy departure. The boats were repaired, the snow was cleared away from about the ships, and other preparations were made. They also began to turn up a small piece of ground for a garden, hoping to produce something in the way of vegetable diet before removal, especially as they were supplied with glazed frames for hot beds. There was not, however, a bare spot to be seen, and it was necessary to clear away two or three feet of snow, in order to find a space fit for the purpose; and the earth was then so full of stones and frozen ground that it required great labor to prepare mould enough even for the frames. They were nevertheless completed, and sown with mustard, cress and pease. Yet it soon became evident that the climate was too rigorous to be contended with. A register thermometer left twentyfour hours under the frames ranged from 25° to 100° , they being closely covered with mats after sunset. The only water that could be procured for the seeds was by melting snow, and the snow-drifts frequently so covered the frames that the labor of half a day was often requisite, after the snow had fallen, to remove it so as to admit the light.

It was suggested that, strongly as the ice was now cemented about the ships, they might, by cutting a trench round their bows to the depth of three or four feet, and taking care not to admit the water, have an opportunity to examine the planks and caulk the seams where they most required it. The plan was adopted, and was found to answer the purpose for which it was intended, completely.

On the morning of the 16th, Capt. Lyon again set out on a journey of discovery, by land. They found the passage between the island and the continent from one to two miles broad, and that the nature of the ice would not admit of cutting off any of the distance to be travelled between the island and the northeastern point of land.

The snow on shore was now diminishing from day to day, yet so slowly that it was necessary to make a mark on some stone, to be assured that it was receding. Ravens made their appearance and the clouds seemed to indicate that the moisture of the atmosphere was returning.

Our friend Okotook being attacked by an inflammation of the lungs, was taken on board the *Hecla*, and put under the surgeon's hands. His confidence in the skill of this gentleman was soon shaken by the pain caused by the application of a blister. It was amusing to see him take physic for the first time in his life. He knew its taste was not pleasant, but this was not all he dreaded, for before he put the cup to his lips with one hand, he held his wife fast with the other, and she held by him, as if they both expected some explosion, as its immediate effect; nor did he relinquish his grasp till the taste left his palate. The quantity of water he drank was beyond conception; the cabin fire scarcely melting snow enough for him. His wife showed much affection and solicitude respecting the effects of his dose, not being able to comprehend that one pain was to be removed by inflicting another.

Capt. Lyon being desirous of having some little

clothes made as models of the Esquimaux costume, and thinking Iligliuk's (the wife of Okotook) present leisure afforded her a good opportunity of making them, obtained her promise that she would do so. Okotook being now very much better, and she having herself resumed her usual gaiety in consequence, the Captain pressed her to commence her work, and placed the skins before her, when she said that she could not do them here, as she had no needles. These being supplied her, she now complained of having no *tooktoo e-walloo*, (reindeer sinew,) their usual thread. This difficulty, unfortunately for Iligliuk's credit, was as easily overcome as the other; and when scissors, pattern-clothes, and all the other requisites were laid before her, she was at length driven to the excuse, that Okotook's illness would not permit her to do it. Seeing the Captain half laughing at the absurdity of these excuses, and half angry at the selfish indolence which prompted them, she at last flatly asserted, that Okotook desired her not to work, which, though he knew it to be a falsehood, the latter did not deny. The officers then supposed that some superstition might be at the bottom of this; but having, a little while after, by way of experiment, thrown Iligliuk some loose beads upon the table, she eagerly employed herself for half an hour in stringing them, that not one might be lost; which proved, that where her own gratification or interest was concerned, Okotook's illness was not suffered to interfere. This anecdote shows, in a strong light, that deep-rooted selfishness, common to this peo-

ple. The fact was, that she did not feel inclined so far to exert herself as to comply with Capt. Lyon's request; and the slight degree of gratitude and proper feeling, which was requisite to overcome that disinclination, was altogether wanting.

Two Esquimaux women, coming on board, were invited into the cabin. It was observed that it required unusual solicitation to make them go near Okotook, or even to the side of the cabin where he was. They however talked freely with him from the other side, while he lay concealed behind a screen. After they were gone, it was found that this unfortunate though well-intended visit had occasioned great distress to the patient, who talked incessantly about having been seen by one of them, which, it seems, ought not to have happened. We know not what misfortune he apprehended in consequence, but he spoke of it with agony, and was evidently agitated by some powerful though absurd superstition respecting the circumstance; but the next day he entirely recovered his gaiety.

CHAPTER XI.

Captain Lyon's Journey.—Departure of the Esquimaux.—Progress of the Season.—The Ships put to Sea.—Description of Winter Island.—Cataract on Barrow's River.—Walrusses killed.—The Ships reach Igloodic.—Igloodic and other Islands.—Strait of the Fury and Hecla.

THE caulking of the bows being now completed, the ships were released from the ice by sawing

round them ; an operation which made them rise in the water six inches and a half, in consequence of the buoyancy occasioned by the winter's expenditure.

An increased extent of open water appearing in the offing, Capt. Lyon again departed, accompanied by nine persons, with a tent, fuel, and provisions for twenty days. Each individual was furnished with a light sledge, to draw his provision and baggage, which might weigh about an hundred pounds. Their instructions were, after gaining the continent to proceed along the coast and examine it, and to make observations respecting the tides and the natural productions of the country.

He set out on the 8th of May, and rested on the 9th at a low, rocky point, which he called Point Belford. Proceeding northward, he had given the following names successively to different parts of the coast, viz. Blake's Bay, Adderly's Bluff, Palmer Bay, Point Elizabeth, and Cape William ; when, finding his provision and fuel half expended, he judged it prudent to return.

On the 23d, the Esquimaux, who had long, as they said, been about to depart, set off in earnest, with all their goods and chattels, including a parting gift from Capt. Parry. He had scarcely made these presents, when he had reason to fear that the sudden influx of wealth would produce fatal effects, especially upon the women, whose joy threw them into immoderate fits of laughter, which were followed by floods of tears. The men also were thankful, though less noisy in their acknowledgments. When all was ready, they started. Flocks

of birds now began to give token of returning summer, and, on the 25th, some Esquimaux, who came from an encampment to the westward, reported having seen a great many reindeer. Yet at the close of May it was matter of general regret that there was little prospect of the departure of the ice, and that few indications of a thaw had been observed. The navigators could not fail to remember that at Melville Island, though so much farther north, the season had, on the same day two years before, advanced full as far as now at Winter Island. The parts of the land which were most bare were the smooth, round tops of the hills, on some of which were little pools of water. There were also, on the low lands, a few dark, uncovered patches, looking, in the snow, like islets in the sea. Vegetation* seemed striving to commence, and a few tufts of saxifrage oppositifolia, when closely examined, discovered some signs of life. Such was the state of things on shore: upon the ice appearances were as unpromising. Except in the immediate vicinity of the ships, where from incessant trampling, and the deposit of various stores upon the ice, some heat had been absorbed artificially, there was no perceptible sign of dissolution on the upper surface, where six or seven inches of snow yet remained on every part. In these circumstances, Capt. Parry resolved to try what could be done to release the ships by cutting and sawing. Arrangements were, therefore, made for getting everything on board, and for commencing this laborious work.

The operation began on the 3d of June, and was

completed in sixteen days, by severe and persevering labor. In the mean while, Nature seemed unwilling to lend our mariners any aid: the dissolution of the ice was so slow as scarcely to be perceptible. However, it was so weakened by the cut made, that the first pressure from without effected a rupture, so that a favorable breeze only was needed to enable the ships to put to sea. On the 2d of July, the wind, for the first time became fair, and the ships sailed.

Winter Island is ten miles and a half in length, from N. W. by N. to S. E. by S., and its average breadth from eight to ten miles. It is what seamen call rather low land; the height of the S. E. point, which was named Cape Fisher, out of respect to the chaplain and astronomer, being seventysix feet, and none of the hills above three times that height. The outline of the land is smooth, and in the summer, when free from snow, presents a brown appearance. Several miles of the northwest end of the island are so low and level, that, when the snow lay thick upon it, our travellers could only distinguish it from the sea by the absence of hummocks of ice.

The basis of the island is gneiss rock, much of which is of a grey color, but in many places also the feldspar is so predominant as to give a bright and red appearance to the rocks, especially about Cape Fisher, where also some broad veins of quartz are seen intersecting the gneiss; and both this and the feldspar are very commonly accompanied by a green substance, which appeared to be pistacite, and

which usually occurs as a thin lamina adhering strongly to the others. In many specimens these three are united, the feldspar and quartz displaying tolerably perfect crystals. In some of the gneiss small red garnets are abundant, as also in mica-slate. In lumps of granite, which are found detached upon the surface, the mica sometimes occurs in white plates, and in other specimens is of a dirty brown color. There are several varieties of mica-slate, and some of these have a brilliant metallic appearance, like silver; those which are most so, crumble very easily to pieces. The most common stone next to those already mentioned is lime, which is principally schistose, and of a white color. Many pieces of this substance, on being broken, present impressions of fossil-shells, and some have also brown waved lines running quite through them. Nodules of flint occur in some masses of lime, but they are not common. Iron pyrites is found in large lumps of black stone, tinged externally with the oxyde of iron: it is here and there met with in small perfect cubes.

Sailing northward along the coast, the ships were soon stopped by the ice. While they remained stationary, a party of natives were discovered on shore, who proved to be their neighbours of Winter Island. They were cordially greeted by the officers and seamen as old acquaintances, and loaded with presents. On leaving the ships, one of them sent Capt. Parry a piece of seal skin as a present, without the least prospect or expectation of a return. We mention this trifling incident, merely because it

was the first and only undeniable proof of gratitude observed among these people.

Slowly and painfully our navigators pursued their course northward, always with difficulty and often with great danger. On the 12th of the month, they discovered the mouth of a considerable river, and Capt. Parry went on shore to examine it. The water was fresh, and the stream varied in breadth from four hundred yards to the third of a mile. After ascending a mile and a half, the Captain heard the roar of a waterfall. At the mouth, the banks of the river were about two hundred feet high, but here they rose much higher, and the water ran on a more elevated level. As Capt. Parry proceeded inland, he found the stream rushing with great fury over two small cataracts. Then turning a right angle of the river, he perceived a greater spray, occasioned by a very magnificent fall. Where the stream begins its descent it is contracted to the breadth of one hundred and fifty feet, the channel being worn in a solid bed of gneiss rock. After falling about fifteen feet, at an angle of thirty degrees, the river is again narrowed to forty yards, and, as if collecting its strength for a great effort, is precipitated ninety feet, in one unbroken mass. A cloud of spray rises from the cataract, surmounted by an uncommonly vivid rainbow. The basin which receives the fall is circular and about four hundred yards in diameter, rather wider than the river immediately below. Above the cataract, the stream winds in the most romantic manner imaginable among the hills, with a smooth and unruffled surface. To this beautiful

water-course Capt. Parry gave the name of Barrow's River. Its entrance is in latitude $67^{\circ} 18' 05''$, and longitude $81^{\circ} 25' 20''$.

The next day large herds of walrusses were seen upon the drift ice, and the boats were sent to kill some for the sake of the oil. The sportsmen found them lying huddled together, piled upon one another. They waited quietly to be shot, and were not greatly alarmed even after one or two volleys. They suffered the people to debark on the ice near them, but on their near approach displayed a somewhat pugnacious purpose. After they got into the water three were struck with harpoons and killed. When first wounded, they were quite furious: one of them resolutely attacked Capt. Lyon's boat, and injured it with his tusks. Those which remained uninjured surrounded the wounded animals, and struck them with their tusks; whether to assist their escape, or with a hostile intention, cannot be ascertained. Two of the animals killed were females, and one weighed over fifteen hundred pounds, which was not considered an uncommon bulk. The strength of the walrus is very great. One of them being touched with an oar, seized it with his flippers, and snapped it with the utmost ease. Many of these animals had young ones, which, when assailed, they carried off, either between their flippers or on their backs. They were most easily killed with musket-balls, even after being struck with the harpoon, as their skins are so tough as to resist a whaling lance.

On the 15th, the ships reached Igloolik, for

the situation of which we refer our readers to the map. Here they found a new band of Esquimaux, who proved to be the acquaintances and relatives of those of Winter Island. These people dwelt not in snow huts, but in tents, made of the skins of the walrus and seal, the former shaved thin enough to allow the transmission of light. They were clumsily made, and supported by a kind of tent-pole, constructed by tying bones or deer's horns together. The edges of the tents were kept down by placing stones upon them. To keep the whole fabric erect, a thong was extended from the top to a large stone at the distance of a few yards. These abiding places had little appearance of affording comfort or convenience.

From these people Capt. Parry learned that he had unquestionably been coasting the *continent*. He then determined to attempt to penetrate a large inlet, stretching westward from Igloodik, which, at the time of his arrival, was closed by a fixed barrier of ice, and which he named The Strait of the Fury and Hecla. We shall not follow the navigators in their arduous but unsuccessful efforts to penetrate westward at this point, as we have already allotted more space to their adventures than consists with our intended limits. Suffice it to say, that after persevering in the attempt till the 30th of September, they found themselves as far from the attainment of their object as at first. The cold weather then setting in, they were compelled to lay the ships up at Igloodik.

One important point was settled, however, be-

yond the possibility of doubt. Finding his researches ineffectual by water, Capt. Parry undertook to explore the Strait of the Fury and Hecla by land. He found it continuous, and pursued his journey far enough to see the open sea beyond, thus proving the existence of a passage at this point, though it was then, and probably ever will be, closed by an insurmountable barrier of ice. Beside this result of his endeavours, the position of Cockburn Island, and indeed of all the lands adjacent to Igloolik, was ascertained, and correctly laid down on the map.

Beside the Esquimaux found at Igloolik, our friends had the society of the savages of Winter Island, who rejoined them shortly after their arrival. We are sorry that we cannot relate the adventures and observations of this winter, as they are extremely entertaining; but as they are not important in their nature, we trust to be excused for omitting them.

Igloolik is a low island, ten miles long and six broad, and exhibits the same appearance of sterility as the adjacent continent, excepting in places which have been inhabited by the natives. There, the accumulation of animal substances has produced a luxuriant vegetation. In some parts there are spots several hundred yards in extent, covered with bright green moss. The whole land seems to be composed of innumerable fragments of thin schistose limestone, some of which contain the impressions of fossil remains, while others present the cellular structure usually found in madreporite. The interior is al-

most an entire swamp; but there are rising grounds, which, with the remains of Esquimaux habitations upon them, are excellent landmarks.

East of Igloolik is a group of small islands called by Captain Parry Calthorpe Islands. Like almost all the land in this vicinity, they are low, but their geology differs from that of Igloolik, and in every respect resembles that of Winter Island, being composed of gneiss. Two of this group, however, are high and rugged. From the top of one of these there is a good view of the adjacent shores.

The entrance of the Strait of the Fury and Hecla is about three miles wide, and is formed by two projecting headlands, between which the tide rushes with great velocity. The south shore is high, but of gradual ascent, perfectly smooth, and composed of beautifully variegated sand-stone. Beyond the entrance the land is bold and mountainous. Capt. Parry, who it will be remembered explored the southern shore of the strait, states the hills to consist of grey gneiss and red granite, rising, in some instances, a thousand feet above the level of the sea. In some places he saw slate, and in others sand-stone. He has left no positive data, by which we may determine the length of this strait; but as he was rather more than a day in accomplishing the distance on foot, by a circuitous route, we may conclude that it does not exceed fifteen or twenty miles. From the point where his journey terminated he saw a continuous sea to the westward, open and unobstructed save by ice and by one small island.

There are several islands in the Strait of the Fury and Hecla. On one of these (Liddon Island) abundance of beautifully veined clay iron-stone was found. The other minerals were asbestos, crystals of carbonate of lime, and a great variety of sandstone, of which the island is formed.

Amherst Island is flat, and the northern part is formed of black slate, with strong indications of coal. This part of the island is utterly bare of vegetation. In a low cliff of black and rugged slate there is a beautiful and romantic grotto. The water, oozing through the sides and roof, has formed the most brilliant stalactites, which form a splendid contrast with the shady part of the ebon grotto behind. The other part of the island is of clay and limestone, on which there is a very scanty covering of shrivelled grass and moss.

The incidents of the winter spent at Igloolik relate almost exclusively to the intercourse of the navigators with the Esquimaux. We propose to give the principal results of their observations, in a separate chapter.

CHAPTER XII.

Physical Character of the Esquimaux.—Costume.—Female Avocations.—
Sledges, Dogs, Weapons, &c.—Manner of killing Deer and Musk
Oxen.

THE Esquimaux seen during this voyage comprise nearly the whole aboriginal population of the northeast coast of America, from Wager River to

Igloodik. They are a small race, much beneath the physical standard of Europeans. The tallest man seen by our friends was five feet nine inches and three quarters in height, and the tallest woman was five feet six inches, but the average height was below five feet. They are deficient in muscular power, as was proved by trials of strength with the seamen of the expedition. Even in the young and strong men the muscles are not prominent, but are smoothly covered, like the limbs of women. There is, besides, a contradiction between the different parts of the most robust of them ; which is, that however well defined the chest may be, the neck is small, weak, and sometimes shrivelled. They are active wrestlers among themselves, yet they can neither run nor jump, and in walking they turn their toes inward, like some other savage tribes. Very few of the men are inclined to corpulence, though distended abdomen is universal in the tribe. The women are, sometimes, obese, but this is probably owing to their sedentary habits. The feet of both sexes are small and well formed.

The necks and shoulders of the young women are generally well proportioned, though large. They cannot be said to walk, but rather to waddle, owing to the enormous size of their boots, which are the receptacles of their children and of all moveables, and preclude the possibility of ever learning to run or jump. This remark, indeed, applies to both sexes.

Both sexes dress nearly alike, in the manner already described, and probably no other would be

as well adapted to their mode of life. We must remark, however, that in summer they commonly wear coats, boots and breeches of duck skins, with the feathers inward. Ornaments, as for instance, strings of foxes' teeth or plaits of hair, are worn exclusively by the men. The breeches of the men are often made of pieces of different colors; those of the fair sex are invariably plain. Children, till they are two or three years old, wear no clothing whatever, but lie naked in the hoods of their mothers. At last they are stuffed into a dress of fawn's skin, with the jacket and breeches of one piece, the back part of which is left open, but a string or two makes all tight again.

The boots of the soft sex are the most preposterous part of their equipment, being of such immense size as to resemble leathern sacks. They give a deformed as well as ludicrous appearance to the whole figure. The bulky part is at the knee, while the upper end terminates in a pointed flap, which covers the front of the leg, and is fastened with a button to the waistband of the inexpressibles.

While speaking of the costume of the Esquimaux, we must not omit their manner of dressing the hair. The men cut it square across the forehead, and leave the side-locks to grow. Those who suffer it to grow all over the head, tie the tresses up in a bunch, which gives them a very singular appearance; but most of the young men clip the crown quite close. The women divide their very long, black locks neatly on the top, and arrange them in two mighty pigtails, which hang down on either

side, each having a piece of bone for a stiffener. Round this, the hair is bound by a sort of ribbon of skin with the hair on, so as to form a pretty spiral pattern, terminating in a rosette. In this, as in many other particulars, they differ from the women of Hudson's Strait.

The women, beside making all the clothing of the tribe, prepare the materials, as the men consider their duty discharged when they have killed the animals whose skins are to be dressed. Delicacy will not permit us to describe the abominably filthy manner in which this operation is performed. It is also the part of the wife to repair her husband's garments, and to dry them when wet. Indeed these occupations fall to the women in almost all barbarous communities. Cookery also is performed by the women. Washing is out of the question, as the Esquimaux think it entirely superfluous.

One of the most primitive of their contrivances is their method of striking fire. It is done by striking together two pieces of iron pyrites: the sparks are received in a bag of dry moss. Another way is, by the friction of two pieces of wood; but this is seldom practised.

We have already spoken of the canoes of the Esquimaux. The article of next importance is the sledge. He who has a canoe and a sledge is considered a man of property. To describe this article is impossible, as there are no two alike, and they differ both in form and material. The best are made of the jaw-bones of the whale, sawed into slips two inches thick and from six inches to a foot

deep. These are the runners; the side pieces are connected by means of bones, pieces of wood, or deer's horns, fastened across, at intervals of about two inches, and yield to any considerable strain. The general breadth of the upper part of a sledge is about twenty inches; but the runners lean inward, and therefore it is greater at the bottom. The length of bone sledges is from four feet to fourteen. The skin of the walrus, when hard frozen, is often used for runners, being as thick as a board, and ten times stronger. Sometimes the dogs are harnessed to a rough piece of walrus hide, or a cake of ice, hollowed like a bowl, which serves very well for a time.

The dogs by which the sledges are drawn are much like the English shepherd's dogs, but more muscular and broad chested, owing to their habits of hard labor. The ears are sharp and erect, and the whole aspect is savage. The hair is very long, and in winter a warm coat of fur is found under it. These animals are not only useful for draught, but assist the Esquimaux to overcome his most formidable enemy, the polar bear.

An Esquimaux, with three or four dogs, will not hesitate to attack a bear. The dogs overtake and keep the animal in check till their master comes up. When the hunter arrives, he spears the bear from a distance, if he can find a piece of ice to which he may fasten the line. If no such convenience is at hand, he darts the unencumbered spear behind the bear's shoulder, and then trusts to the spirit of his dogs and his own activity. Springing

from side to side, he avoids the wounded animal. If the lance drops from the wound, it is again thrown; but if it sticks fast, the dogs attack the bear's legs, while the man rushes on and despatches him with his knife.

They have four kinds of spears, one of which is large and strong, with an ivory point, to despatch large animals. A lighter kind, used to take seals, has a loose head, which is tied to a bladder with a line. When this is struck into a seal, it is instantly liberated from the handle, and the inflated bladder serves to show the course of the animal, as well as to impede his progress. Another similar spear has no appendages. The fourth and last is used to strike birds, young animals, or fishes. It has a double fork at the extremity, and there are three other barbed ones at about half its length, diverging from the shaft in different directions, so that if the end fork should miss, some of the centre ones may take effect.

Another curious contrivance to catch seals is a slender rod of ivory, a foot long, and as thick as a fine knitting-needle. Its purpose is to warn the hunter, who watches a seal hole, of the approach of his prey, so that he may strike without seeing or being seen. At the lower extremity is a small knob, like the head of a pin; at the upper, is a string by which it is attached to the ice. The animal, in rising, does not perceive so small an object, but pushes it upward with his nose, when the hunter perceiving it in motion, strikes down, and secures his prize.

The same want of wood which causes sledges to

be constructed of bone compels the Esquimaux to make their weapons of the same material. The horn of the musk-ox, thinned horns of deer, and other bony substances are converted into bows, of an infinite variety of patterns. Three or four bones or pieces of wood are frequently put together in one bow, the strength of which lies in a collection of plaited sinews, which run along the back of the implement. Being quite tight, and very elastic, they cause the weapon, when unstrung, to bend the wrong way; when bent, their united strength is astonishing. The general length of these bows is about three feet and a half. The arrows are short, and commonly of bone, with a stone head.

The Esquimaux show no small ingenuity in their manner of killing deer. When the animal is feeding on level ground, the hunter makes no attempt to approach; but if rocks be near, he conceals himself behind them, and skilfully imitates the cry of his prey. Sometimes, for more complete deception, he draws his deer-skin coat and hood over his head, in order to resemble the creature he is approaching. He seldom shoots till the deer is within ten or twelve paces, and thus, with the aid of extreme patience, he renders his paltry weapons as effective as the fire-arms of white men. The musk-ox is killed in nearly the same manner, and the Esquimaux arrows make great havoc among the feathered race. Beside the modes of procuring subsistence we have described, there are many others which we have not room to notice.

CHAPTER XIII.

Travelling.—Marriages.—Treatment of Children.—Theology.—Honesty.—
Beggary.—Ingratitude.—Hospitality.—Lying and Slander.—Courage.—
The Ships return to England.

THE Esquimaux have the same rambling propensity which distinguishes the more southern Indians, with this difference, that they prefer the most desolate and inhospitable countries to those which are covered with vegetation. There are no established settlements along a great extent of coast at which they may be said to have a fixed habitation ; but there are three or four general mustering places, at which they assemble at certain periods. Igloolik is one of these. In travelling, they depend entirely on landmarks ; and though they know the cardinal points, and are acquainted with certain particular stars, they care little for the presence of the sun, or whether the weather be clear or otherwise. The setting in of winter is their principal time of journeying, as their sledges then move easily on the snow.

It is very common with the Esquimaux to betroth their children from infancy ; and in consequence of this compact, the parties live together as man and wife as soon as they are inclined. Sometimes they select wives for themselves, and in such cases little regard is paid to personal beauty. Young men prefer young women ; but the elderly content themselves with widows, as more experienced, and better able to provide for mutual comfort. There is

no marriage ceremony, and the connexion is dissolved at pleasure. Bigamy is common, but no instance was observed where a man had more than one wife. Divorced women are common, but they soon marry again. Widows who have friends, and enjoy health, fare as well as married women ; but the want of either seals their fate, and they are left to starve, with their children. Cousins marry, but a man never weds two sisters. Their most extraordinary connexion is by adoption, for there are few families which have not one or more adopted children, their own being at the same time adopted by others. This connexion binds the parties as firmly as the ties of blood ; and an adopted son, if senior to one by nature, inherits the family riches : this exchange of children frequently takes place between those related by consanguinity.

No people are fonder of their children than the Esquimaux. The mothers carry them naked on their backs, until they are good walkers, and employ their whole time in nursing and feeding them. The fathers are constantly making toys, and giving them all the assistance in their power. They have their own way in everything, and are never scolded or corrected. Yet this kindness is not reciprocated by the children, when their parents become unable to support themselves.

The Esquimaux, like other savages, are superstitious. They have priests who pretend to hold intercourse with the invisible world, and thus acquire a certain influence over their countrymen. Capt. Lyon was present at a pretended interview be-

tween one of these jugglers and his patron spirit, which took place in the dark, and which proved that the priest was merely a ventriloquist. It would seem that the Esquimaux believe in a countless multitude of spirits, some male, and some female. Packimna, one of the latter, lives in a western land, and is the protectress of deer. There is also a large bear, who lives on the ice at sea, where he often meets the priests and converses with them. Another, called Nooliayoo, is the mother, protectress, and monopolist of marine animals, which she sometimes confines below, and so causes a scarcity in the upper world. When this is the case, the priest pretends to pay her a visit, in order to obtain their release.

There are few tribes more honest than the Esquimaux. They never touch each others' property without permission; and on board the ships their scruples were the same. Some few thefts, indeed, took place; but if it be considered how great a temptation so many articles, all of the utmost importance to them, presented, such instances will not weigh very heavily against their general character. Only three of their whole number were considered professed thieves, and they performed their work so clumsily as to be instantly detected. In contrast with these, a great many examples of singular honesty might be adduced, where things were dropped and supposed to be lost, and yet were returned by these poor savages, though they might have retained them without incurring suspicion.

We wish we could speak as favorably of them in

other respects. They are envious to a degree scarcely credible. The possession of an article by any individual is sure to draw on him the ill will of him who covets it. This vice naturally led to begging, as our voyagers had constant occasion to remark. Their demands were always introduced by a reference to favors conferred on some other; and it may not be improper to remark that the ladies are the most addicted to this practice.

Gratitude, we might say, were it not for one instance already mentioned, is absolutely unknown among them, by action, word, or look. No service rendered, no kindness shown, no gifts bestowed, can awaken a thankful feeling, and those who relieve their distresses are ridiculed as soon as the present want is supplied. Their parents receive no attention in their old age; and the very food they eat is bestowed, not from good feeling, but because their hospitality is free to all. Indeed, selfishness seems to be their predominant principle. The husband cares not for the wife in the hour of sickness or danger, and the wife is equally regardless of the husband. The infirm and helpless receive no attention, but are abandoned by the strong and active, as useless burthens. Parents care so little for their children as to refuse them the rights of sepulture, and see the dogs feed on their carcasses with the utmost unconcern. Wo to the invalid who has no near relation: he or she is walled up in a snow hut, and left to perish without the smallest compunction. Children are buried with their dead mothers; and none of these things excite the slightest feeling of remorse.

Their hospitality cannot extend farther than it does. Strangers are received in the kindest manner, every want is removed, every accommodation is supplied, and they are thanked for their acceptance. Our voyagers found the women especially solicitous for their comfort, and were fully convinced, by the manners of their hosts, that they were welcome. They invariably met with the same treatment, and their property was scrupulously respected; and all this proceeded from motives of pure hospitality, for the same persons wearied them by importunate beggary on all other occasions. As a proof of this, if, on the next day, they asked for the smallest article, even a bit of moss, immediate payment was demanded.

There is another dark shade in the character of these people: their envious disposition continually leads them into falsehood. Their lies, however, are confined to vilification of each other and false accusations of theft or other misconduct. It is but rarely that they speak well of one another, and as rarely that they persist in an untruth. In this particular also the ladies are the most culpable, as well as in quarrelling and beggary.

The men who dare to engage the terrific polar bear in single combat, and who trust themselves at sea in stormy weather on small cakes of drift ice, cannot be called cowardly. There is an expression of confidence, courage, and independence peculiar to the Esquimaux, which is highly striking. The firm step, erect person, and fearless eye, all denote a person accustomed to depend on his own resour-

ces, and certain of their efficacy. Their habit of venturing to sea on pieces of loose ice, which by a change of wind or sudden rupture, might carry them to sea, confirms them in their insensibility to danger; and this very indifference has been the death of many a man, who has left his hut in search of subsistence, to return no more. Their courage is, however, in no shape allied to ferocity. They have not much of the milk of human kindness, but their equanimity is admirable. In pain, cold, starvation, disappointment, or when roughly treated, their good-humor is not disturbed. Few are ever sulky; or if they are, it is for a short time only. If they are angry at neglect or punishment, in a few minutes their gaiety returns, and they are as well disposed towards the person who affronted them as before. Quarrels seldom occur among them, and rarely, if ever, proceed to blows; indeed the little instances of spite before mentioned are almost the only disagreements they have. The passion of revenge is unheard of among them, and our voyagers heard of no instance of murder or warfare, or of any dislike to particular persons being transmitted from father to son. When they were informed of the bloodthirsty disposition of the more southern Indians, and when instances of their ferocity were related to them, they expressed the utmost horror.

* * * * *

We must here conclude our account of the Esquimaux, and of the voyage by which this knowledge of them was obtained.

On the 9th of August the ships ran out of their

harbour, where they had been detained three hundred and nineteen days. They were so embarrassed by the ice, that little use could be made of their sails ; nevertheless, by the 30th of the month they passed Winter Island, having been carried three degrees by the drift in which they were beset. On the 9th of October, they made the Orkney Islands, and on the 10th reached Lerwick in Shetland, where they were received with many congratulations on their safe return.

CAPTAIN PARRY'S

THIRD VOYAGE OF DISCOVERY.

The Ships leave England, and arrive at Disko Island.—The Ice crossed.—Arrival at Lancaster's Sound.—Port Bowen.—Aurora Borealis.—Animals.—Farther Proceedings.—The Fury wrecked.—Return to England.

THOUGH neither of the two first voyages of Capt. Parry had been successful, the British government resolved to fit out a third expedition. Accordingly the Hecla and Fury were made ready for sea, the latter under the command of Capt. Hoppner, and sailed from England on the 16th of May eighteen hundred twentyfour. They were to attempt the northwest passage at Prince Regent's Inlet. They crossed the Atlantic without any material adventure, and made the bay of Lievely in Disko Island on the 5th of July. As this place has been described in that part of our work which relates to Greenland, it is unnecessary to say anything of it here.

Sailing up Baffin's Bay, on the 17th the ships came to the ice, and from this time the obstructions from its quantity, magnitude and closeness, were such as to keep the crews constantly employed in

heaving, warping or sawing through it, yet with so little success, that at the close of the month they had only penetrated seventy miles to the westward. Here they encountered a hard gale, and sustained several shocks that would have crushed any ship of ordinary strength. Not to dwell upon their labors and dangers during the eight weeks occupied in crossing this formidable barrier, they reached Lancaster's Sound on the 10th of September. The entrance of the sound was, as usual, free from ice, excepting here and there a berg floating about in solitary grandeur.

The winds not being favorable, the ships made small progress, and on the 13th the crews had the mortification to perceive the sea ahead covered with ice, in attempting to penetrate which they were soon immoveably beset. Nevertheless, the exertions of Capt. Parry and his coadjutors were unremitting. We have in our account of former voyages detailed the usual modes of proceeding in such cases.

The officers landed at one place, a little east of Admiralty Inlet. Here they found the beach covered with fragments of bituminous shale, slate and iron-stone, interspersed with limestone gravel. Travelling inland, the surface was of secondary limestone, and there were many indications of coal. The vegetation was, as usual in those regions, very scanty.

With great exertion and extreme difficulty the expedition reached Port Bowen in Prince Regent's Inlet, on the 27th, where, by the middle of October,

Capt. Parry deemed it advisable to lay up the ships for the winter. The lands on each side of this spot run nearly east and west, and rise from six to nine hundred feet above the level of the sea, with deep and broad ravines intersecting the country in every direction. Several journeys inland proved the country to be exceedingly broken and rugged; so much so that the researches of the explorers were of necessity confined to a very limited extent. The surface was so completely buried in snow, that little knowledge of its nature or geology was gained. Traces of Esquimaux were found in every direction, but those by whom they had been left were nowhere seen.

Some brilliant displays of the Aurora Borealis were observed this winter, one of which we shall describe. About midnight on the 27th of January, it broke out in a single compact mass of yellow light, appearing but a short distance above the land. This light, notwithstanding its general continuity, sometimes appeared to be composed of numerous groups of rays, compressed laterally, as it were, into one, its limits to right and left being well defined and nearly vertical. Though always very brilliant, it constantly varied in intensity; and this appeared to be produced by one volume of light overlaying another, as we see the darkness of smoke increase when cloud rolls over cloud. While some of the officers were admiring the exceeding beauty of the phenomenon, they were suddenly astonished at seeing a brilliant ray shoot down from the general mass *between them and the land*, thence distant three thousand yards.

The principal animals seen at Port Bowen were bears, of which twelve were killed during the winter. Two foxes were killed, and four more were taken in traps. These last lived for some time on board the *Fury*. They were pure white till May, when they shed their coats, and assumed a dirty chocolate color with brown spots. Hares and mice were seen, but no deer or wolves. These animals appeared but rarely, and the same may be said of the feathered creation.

In July, a canal was sawed in the ice, and the ships were towed to sea. Captain Parry hoped to sail over to the western shore of the inlet, but he had only made eight miles in the intended direction, when he was stopped by the ice. As no opening appeared in that quarter, he determined to try to cross more to the northward. The most he gained was some knowledge of the character of the shores. A reference to the map will show the principal positions ascertained by astronomical observation.

It was observed that in certain parts of Prince Regent's Inlet the water was of a milky hue. The land in the vicinity of Hasting's Elwin Bay, explained this appearance. Its formation was of lime, with a narrow earthy stratum of gypsum, some of it of a very pure white. A part of the rock contained a quantity of it in the state of silenite in transparent laminæ of a large size.

On the 30th of July, the ships being beset close to the land, a hard gale brought the ice close upon them. The *Hecla* received no damage but the breaking of two or three hawsers; but the *Fury* was forced on

shore. She was heaved off again, with little injury, but this was but the commencement of her misfortunes. On the 1st of July, she was again nipped, and so severely strained as to leak a great deal. As the tide fell, her stern, which was aground, was lifted several feet, and the Hecla also remained aground. No place was found where the Fury might be hove down to repair the damage, as the shore was everywhere lined with masses of grounded ice. The ships were again made to float, but it was found, notwithstanding incessant labor on board the Fury, that four pumps constantly going could hardly keep the water under. In these circumstances the only harbour that could be found was formed by three grounded masses of ice, within which the water was from three to four fathoms deep at low tide.

On the night of the 2d, the ice came in with great violence, and again forced the Fury on shore. The strength and number of the Hecla's hawsers only saved her from sharing the same fate. Seven of these, of six inches diameter, and two stream cables were barely sufficient to bear the strain. In the mean while the crew of the Fury were completely exhausted by labor, and their hands had become so sore by the constant friction of the ropes that they could no longer handle them without mittens. In this situation it was determined to land the stores and provisions of the vessel, in order that she might undergo a complete repair.

Accordingly anchors were carried to the beach, by which the grounded icebergs that formed the

harbour were secured in their position, thus enclosing a space just sufficient to admit both ships. In this position a great part of the *Fury's* stores were landed. The injury was found to be more severe than had at first been supposed; indeed, it appeared that the compactness of her fabric had alone saved her from sinking. Nevertheless, no exertion was spared to render her sea-worthy again, though the daily pressure of the ice was another, and a very great disadvantage. While the operations of heaving down and repairing were going on, the bergs by which the harbour was formed suffered constant diminution by the washing of the sea, and frequently changed their position, owing to the pressure of the external ice.

In spite of every effort, it was found impossible to save the *Fury*, and the *Hecla* was greatly endangered in the attempt. She was compelled to leave the land and drift about among the ice, to avoid being forced on shore. On returning, Capt. Parry found that the *Fury* had been driven farther on the beach than before, and nine feet of water were in her hold. Her keel and bottom were more injured than ever. The first glance satisfied Capt. Parry that the vessel could never return to England. By and with the advice of a council of his officers, therefore, he decided to leave her to her fate, and as his provisions would barely suffice for another twelvemonth, to return home. In pursuance of this resolution the *Hecla* reached Sheerness on the 21st of October.

On the eastern shore of Prince Regent's Inlet is

Cape Kater, the most southern point attained by the ships in this expedition. It is in latitude $71^{\circ} 53' 30''$, and longitude $90^{\circ} 03' 45''$. If we add to this that the shores of this strait are everywhere bold and lofty, and that the ice in it seems to be perpetuated from year to year, we believe that we have communicated to our readers all the information gained by this voyage.

It appears, from the discoveries of Capt. Parry, almost beyond the possibility of a doubt, that there are at least three passages, by water, round the northern shore of America; viz. through Barrow's Strait, through Prince Regent's Inlet, and at the Strait of the Fury and Hecla. Whether they are at any time passable, future attempts only can determine. It seems to us, however, that, even though a passage should be effected, these channels can never be rendered available for the purposes of commerce or navigation.

CAPTAIN FRANKLIN'S TRAVELS.

CHAPTER I.

Object of Captain Franklin's Journey.—His Instructions.—Captain Franklin arrives at Hudson's Bay.—York Factory.—Swampy Crees.—Departure from York Factory.—Tracking.—Indian Anecdote.—Steel River.—Route of the party up Hill River.—Arrival at Lake Winnipeg.

THE English government having resolved to send an expedition to the northern shores of the new continent, to co-operate with Capt. Parry, and to farther the progress of discovery, Captain John Franklin, of the Royal British Navy, was selected as its commander. Doctor John Richardson and Midshipmen George Back and Robert Hood were ordered to join Capt. Franklin in the enterprize. These officers were to proceed through the interior to the Copper Mine River of Hearne, and thence to its debouchure into the Polar Sea, thence they were to advance, along the coast, to the eastern extremity of America. Arrived at this point, it was left to the discretion of Captain Franklin, in what manner, and by what route he should return. He was directed to ascertain the latitude and longitude

of every prominent point on the coast, to observe the variation of the magnetic needle, and, in short, to observe and record everything that might occur, which should be interesting to science. That his views might find as little obstruction as possible, instructions were sent to the agents of the Hudson's Bay Company, to furnish him with supplies and aid his plans. In pursuance of these orders Capt. Franklin sailed from England on the 16th of June, 1819, and reached York Factory at Hudson's Bay on the 30th of August.

Here Capt. Franklin was assured by Mr Williams, governor of the Hudson's Bay Company, of all the assistance in his power. The opinion of this gentleman and his subordinates was, that the expedition should proceed by the way of Cumberland House, and through the chain of trading-posts to Great Slave Lake; and a large boat was selected by them for the journey. A crew was also provided for this vessel.

York Factory, the principal depot of the Hudson's Bay Company, is, or at that time was, a group of two-story buildings, surrounded by a stockade on the west bank of Hayes' River, about five miles above its mouth, on the marshy peninsula which separates Nelson and Hayes' Rivers. They were disposed in an octagonal form, with an open space in the centre. The officers of the company dwelt in one part of this square, and in the other parts were workshops, stores to contain merchandize, furs, &c.

The surrounding country is flat and swampy, and

covered with willows, poplars, larch, spruce, and birch trees. The soil is alluvial clay. Though the bank of the river is here about twenty feet high, it is frequently overflowed by the spring floods, and large portions are annually carried away by the disruption of the ice, which, grounding in the stream, have formed several muddy islands. These obstructions render the navigation of the river somewhat difficult, but vessels of two hundred tons burthen may be brought through the proper channels as high as the factory.

Capt. Franklin found a few of that band of Kinistenaux called Swampy Crees encamped at York Factory. Their tents were rudely constructed by tying twenty or thirty poles together at the top, and spreading them out at the base so as to form a cone; these were covered with dressed moose-skins. The fire is placed in the centre, and a hole is left for the escape of the smoke. The inmates had a squalid look, and were suffering under the combined afflictions of hooping-cough and measles; but even these miseries did not keep them from an excessive indulgence in spirits, which they unhappily can procure from the traders with too much facility; and they nightly serenaded the officers with their monotonous drunken songs. Their sickness at this time was particularly felt by the traders, this being the season of the year when the exertion of every hunter is required to procure their winter's stock of geese, which resort in immense flocks to the extensive flats in this neighbourhood. These birds, during the summer retire far to the north, and breed in

security ; but when the approaching winter compels them to seek a more southern climate, they generally alight on the marshes of this bay, and fatten there for three weeks or a month, before they take their final departure from the country. They also make a short halt at the same spots in their progress northward in the spring. Their arrival is welcomed with joy, and the *goose hunt* is one of the most plentiful seasons of the year. The ducks frequent the swamps all summer.

While the party remained at York Factory, the weather was unfavorable for celestial observations ; but by the aid of partial glimpses of sunshine it was found that this place is in latitude $57^{\circ} 00' 03''$ N., and longitude $92^{\circ} 26'$ W. The variation of the compass was $6^{\circ} 00' 22''$ E. and the dip of the needle $79^{\circ} 29' 07''$.

All arrangements being completed, on the 9th of September the expedition started. The wind failing when they had attained six miles above the Factory, they were compelled to *track*, or tow the boat up stream, which was a laborious and difficult operation. The men were obliged to walk along the steep declivity of a high bank, rendered soft and slippery by rain, and were moreover impeded by fallen trees, which had slipped from the wood above, and hung on the face of the bank in all directions. At sunset, having made a progress of six miles, the party stopped and encamped. Here the river is about half a mile wide, and from three to nine feet deep. Its banks and islands are allu-

vial, and well covered with pines, poplar, larches, and willows.

A large fire was quickly kindled, supper was speedily prepared, and as readily despatched. Then, covering themselves with buffalo robes, the party betook themselves to rest, and enjoyed a night of sound repose. Thus commenced their travels in the Indian country.

The next day was spent in tracking, with even more difficulty than before. Sometimes the men were obliged to pass under cliffs so steep that they could scarcely obtain a footing, and not seldom over spots so miry as to be almost impassable. In the course of the day, they passed the scene of a very melancholy accident. Some years before, two families of Indians were induced by the flatness of a small beach between the cliff and the river to encamp on it. They retired to rest, not aware that the precipice, detached from the bank, and urged by an accumulation of water in the crevice behind, tottered to its base. It fell in the night, and the whole party was buried in the ruins.

The next day brought Capt. Franklin to the end of Hayes' River, which is formed by the confluence of Shamattawa and Steel Rivers. Steel River, through which the course of the party lay, is three hundred yards wide at its mouth, and its banks are more favorable for boating than Hayes' River. It presents much beautiful scenery, and winds through a narrow, well wooded valley.

On the 14th, the party arrived at the junction of Fox and Hill Rivers, which unite to form the Steel,

as Hayes' River is formed by the Steel and Shamattawa. Soon after entering Hill River, our travellers were overtaken by three boats belonging to the Hudson's Bay Company. The water was now so low, and the rapids so frequent, that their progress was greatly retarded; indeed they only made six miles this day.

The banks of Hill River are higher, and have a more broken outline than those of either Hayes' or Steel Rivers. In some places the cliffs, of alluvial clay, rise eighty or ninety feet above the stream, and are surrounded by hills about two hundred feet high.

Not to enlarge on rapids, and portages, and other difficulties of navigation, the party arrived at Morgan's Rocks, on the upper part of Hill River, on the 19th. Here the banks of the stream, consisting of low, flat rocks with intermediate swamps, permitted them to obtain a prospect of the interior, the surface of which is broken by a multitude of conical hills: the highest of these has given its name to the river, and has an elevation of six hundred feet. From its summit thirtysix small lakes are visible.

Still ascending, the party came, on the 23d, to Swampy Lake, the head of Hill River. Thence they emerged into, and ascended Jack River, which is but eight miles long. Then, after crossing two portages, they entered Knee Lake, so called from its shape. Its shores are low and well wooded, and the surrounding country is also flat. This sheet of water is thickly studded with islands, one

of which is entirely composed of magnetic iron ore, and affects the needle at a considerable distance. On landing, the compass no longer points to the pole.

On the 27th, the party left Knee Lake to ascend Trout River, and in the course of the day passed three portages and several rapids. At one of these portages there is a beautiful cascade sixteen feet high, called Trout Fall. The second portage is over hard and sharp stones, famous among the voyagers for destroying moccasins, and is thence called Knife Portage. Leaving Trout River they crossed Holey Lake, which is a beautiful piece of water, embellished with islets, and abounding in trout, which here often exceed forty pounds in weight. Leaving Holey Lake, the boats entered the Weepinapannis, a narrow, grassy stream, and the next morning reached Swampy Portage.

The Weepinapannis is composed of several branches, which separate and unite again and again, intersecting the country through which it flows in every direction. Captain Franklin pursued the principal channel, and after crossing a small sheet of water named Windy Lake, entered a smooth, deep stream, known by the absurd appellation of Rabbit Ground. The marshy banks of this stream are skirted by low rocks. As the boats proceeded the country became flatter. Crossing another small lake, our travellers arrived at a romantic defile, whose rocky walls, rising perpendicularly to the height of eighty feet, hem in the stream for three quarters of a mile, in many places so closely that

there is not room for the oars. A grand and picturesque rapid terminates the passage, and a brown fishing eagle which has nested on the cliff seems to preside over the scene. This chasm is called The Hill Gates.

On the 1st of October, they reached the White Fall Portage, which is occasioned by three distinct ridges of rock crossing the bed of the stream, and is thirteen hundred yards long. The scenery is rude and striking. Rocks piled on rocks hang over the torrents which sweep their bases, while the bright and varied tints of the mosses and lichens which cover the front of the surrounding cliffs, contrasting with the gloomy green of the pines which crown their summits, add beauty to the grandeur of the scene.

Leaving the White Fall, our friends arrived at the Painted Stone, a rock remarkable for its position among marshy streams which rise on each side of it. This spot may be considered as one of the smaller sources of Hayes' River. On the other side of the Painted Stone rises the Echemamis, which flows to the westward into Nelson River. Having launched the boats over the rock, the party commenced the descent of the Echemamis.

On the morning of the 5th, they entered Sea River, one of the many branches of Nelson River. This they ascended for two hours, crossed a portage and entered Little Jack River, which is a channel between upper and lower Play Green Lakes. Then passing through upper Play Green Lake they encamped at Norway Point on the 6th.

The waters of Lake Winnipeg are opaque ; and Nelson River and Play Green Lake being its discharges, are muddy also, and therefore the rocks concealed in them are doubly dangerous. The crew of one of the Hudson's Bay Company's boats, found this to their cost, as it struck on a reef, and received considerable damage.

Norway Point is the extremity of a peninsula which separates Play Green Lake from Lake Winnipeg. Norway House, at this place, is a post of the Hudson's Bay Company. Having traced the route of our party as far as Lake Winnipeg, we shall postpone their subsequent adventures to the next chapter.

CHAPTER II.

The Saskatchewan.—Arrival at Cumberland House.—Sufferings of the Indians.—First of January.—Bois Brûlés.—Departure of Captain Franklin.—Cumberland House.—Vegetable Kingdom.—Animals.—The Naheewak.

THAT the reader may the more easily trace Captain Franklin and his fellow travellers, we shall give the latitude and longitude of the most remarkable places on their route. Norway Point is in latitude $53^{\circ} 41' 38''$, and longitude $98^{\circ} 1' 24''$.

Leaving Norway House on the 7th of October, the party sailed along the northern shore of Lake Winnipeg to Limestone Bay. This part of the coast is bordered by high clay bluffs as far as Limestone Bay, a distance of thirtyeight miles.

On the afternoon of the 9th, they entered the great river Saskatchewan. In the first two miles there are several rapids. Here the stream varies in breadth from five hundred yards to half a mile, and flows through a stony channel. Then, at the Grand Rapid, the river makes a sudden bend, and rushing through a narrow passage worn in the solid limestone, presents an unbroken sheet of foam. The route from Canada to Lake Athabasca, here unites with that from York Factory.

By noon on the 12th, the boats had passed the rapid, and they moved up the Saskatchewan. As they proceeded the river became wider. Its banks are high, composed of white clay and limestone, and their tops are surmounted by firs, poplars, birches and willows. The current is rapid, like that of the Missouri, and the channel is in many places intricate and dangerous, owing to ridges of rock which jut into the stream. Still advancing, the boats entered Cedar Lake, where a violent gale compelled them to put ashore at a small island and detained them a whole day. On the 16th, they ascended the Saskatchewan eighteen miles, and found the banks low, fringed with willows, and lined with drift wood. The next six days were passed in exertions which brought them to Cumberland House, on Pine Island Lake, a trading post of the Hudson's Bay Company. The margin of the lake was incrustated with ice, so thick, that to effect a landing they were obliged to break it with poles, which satisfied Captain Franklin that it would be advisable to halt for the winter.

Accordingly, houses were built for the men, and measures were adopted to procure provisions for the winter. A building for the officers was completed on the twentysecond of November, at which date the Saskatchewan, and all the other rivers in the vicinity, were frozen over. About this time some Indians came to the post to beg provisions, having been prevented from hunting by sickness. We mention this circumstance to exemplify the miseries of savage life, than which none has greater vicissitudes. Few recitals could be more affecting than the detail of the sufferings of Indians during unfavorable seasons, or in sickness. We have seen some individuals who have been compelled by starvation to feed on the bodies of their own relatives. When we consider that cannibalism is regarded with the utmost horror by the aborigines—indeed, as a sentence of perpetual disgrace on him who resorts to it, we may conceive that a shocking degree of suffering only, can occasion its occurrence.

The travellers, as well as the agents of the Hudson's Bay Company, were supplied with food in the manner common to all trading posts. Hunters were sent out to kill moose, and nets were set in different parts of the lake for fish. The produce of the chase and fishery was brought to Cumberland House on dog sledges. The fishing was not very productive, though sturgeon, tittameg and trout were commonly found upon the officers' table.

On the 1st of January, the new year was ushered in by repeated discharges of musketry, a cer-

emony which has long been observed by the Canadian voyageurs. The party dined on a beaver; no very delicate morsel, as we can testify. In the evening the voyageurs exhibited some grace and much agility in a dance; and the officers had occasion to observe the passionate fondness of the half-bred women for this amusement. These women are the offspring of marriages between the traders and voyageurs and Indian women, or to speak more correctly, in most instances, of concubinage. Little care is bestowed on them by their fathers, and their morals are consequently on a par with those of their respective maternal tribes. They commonly marry (according to the custom of the Indian country) at an early age, and are to be found in every trading-house in the north and northwest. In the north it is not uncommon for one woman to be maintained by two voyageurs, and to consider herself the wife of both. Moreover, the Canadians frequently sell their wives, either for a season or altogether, and the price seldóm exceeds that of a team of dogs. While young, these women are well shaped and handsome; but their features and persons soon become masculine, as do those of the squaws.

The male children of this abominable intercourse commonly follow the occupations of their fathers; that is, they are employed as interpreters or voyageurs by the traders. When they are not thus engaged they roam over the country like the Indians, subsisting by the chase. Excepting that, they speak French, that their complexion is lighter

and that their costume partakes of the fashions of Europe, they differ little from the savages. Physically they are a fine race, well formed and athletic, to a man. This class of men and women are very numerous, and are called *metifs*, *bois brulés*, or half-breeds.

Conversations with the traders at Cumberland House persuaded Captain Franklin of the necessity of proceeding to Lake Athabasca during the winter. The following were his reasons. The residents of Lake Athabasca were better acquainted with the nature of the country north of Great Slave Lake than those of Cumberland House, and there only could guides, hunters, and interpreters be procured. Accordingly, he set off for Carlton House on the eighteenth of January, leaving Dr Richardson behind. We will not follow the adventurous Captain till we have given our readers some information touching Cumberland House and the Indians who inhabit thereabout.

Cumberland House is in latitude $53^{\circ} 56' 40''$ and longitude $102^{\circ} 16' 41''$. Its distance from York Factory is about seven hundred miles. At the time of which we are writing, a house belonging to the Northwest Fur Company stood beside it; but since the two rival companies have united, we believe that it exists no longer. The post was established by Hearne, a year or two after his return from the Copper-mine River, and has ever since been considered by the Hudson's Bay Company as a post of considerable importance. Previous to that time the natives carried their furs down to the shores of

Hudson's Bay, or disposed of them nearer home to the French Canadian traders, who visited this part of the country as early as the year 1697.

The Cumberland House district, extending about one hundred and fifty miles from east to west along the banks of the Saskatchewan, and about as far from north to south, comprehends, on a rough calculation, upwards of twenty thousand square miles, and is frequented by about one hundred and twenty Indian hunters. Of these, a few have several wives, but the majority only one; and, as some are unmarried, we shall not err greatly in considering the number of married women as only slightly exceeding that of the hunters. The women marry very young, have a custom of suckling their children for several years, and are besides exposed constantly to fatigue, and often to famine; hence they are not prolific, bearing upon an average not more than four children, of whom two may attain the age of puberty. Upon these data, the amount of each family may be stated at five, and the whole Indian population in the district at five hundred.

The country around Cumberland House is flat and swampy, and is much intersected by small lakes. Limestone is found everywhere, under a thin stratum of soil, and it not unfrequently shows itself above the surface. It lies in strata generally horizontal, but in one spot near the fort dipping to the northward at an angle of 40° . Some portions of this rock contain very perfect shells.

The vegetable productions of the country about Cumberland House are, first,

The *populus tremula*, or aspen, which thrives best in moist places, and is more abundant on the Saskatchewan than any other tree. When newly cut, it is good fire-wood.

The *populus balsamifera*, or taccamahac, called by the Kinisteneaux the ugly poplar, in allusion to its rough bark, naked stem, and distorted branches. It is an inferior fire-wood. The Indians use a decoction of its resinous buds for snow blindness, but its application to the inflamed eye causes acute pain.

Of evergreens white spruce is the most common. The red and black spruce, the balsam of Gilead fir, and the Banksian pine also occur frequently. The larch is stunted and unhealthy. The common canoe birch is rare, but attains a considerable size. The alder abounds on the small lakes, and the Indians use a decoction of its inner bark as an emetic. The sugar maple, elm and ash grow on the Saskatchewan; but, we believe, no farther north. The choke cherry and a kind of wild plum complete the list of trees.

The *strawberry* is found in abundance, as well as the raspberry. The red whortleberry is found everywhere, but is most abundant in rocky places. The common cranberry is found in all the swamps; and beside these, there are berries of several other species.

The animals of this district are, the bison, the moose, the reindeer, the American elk, the *apeesee-mongsoos*, or jumping deer, the *kinwaithoos*, or long-tailed deer, and the American antelope or cabri.

All these are hunted for food. They all abound in the prairies above the forks of the Saskatchewan, but none of them, excepting the moose and reindeer, are found about Cumberland House.

Of the fur-clad animals, there are red, black, blue, silver, and cross foxes, several varieties of the wolf, the black, red, and grizzly bears, and the wolverene. This last does much mischief, eating the martens which are caught in traps, and is therefore detested by the hunters. The other animals are the American lynx, the marten, the pekan, or fisher, the mink, the otter, the beaver, and the musk-rat.

The land around Cumberland House is low, but the soil, from having a considerable intermixture of lime-stone, is good, and capable of producing abundance of corn, and vegetables of every description. Many kinds of pot-herbs have already been brought to some perfection, and the potatoes equal those of any country. The spontaneous productions of nature would afford ample nourishment for all the European animals. Horses feed extremely well even during the winter, and so would oxen, if provided with hay, which might be easily done. The wild buffalo scrapes away the snow with its feet, to get at the herbage beneath; and the horse, which was introduced by the Spanish invaders of Mexico, and may be said to have become naturalized, does the same; but it is worthy of remark, that the ox, more lately brought from Europe, has not yet acquired an art so necessary for procuring its food. Pigs also improve, but require to be kept warm in the winter. The neighbourhood of the

houses has been much cleared of wood, from the great demand for fuel; there is, therefore, little to admire in the surrounding scenery, especially in its winter garb; few animated objects occur to enliven the scene; an occasional fox, marten, rabbit, or wolf, and a few birds, constitute the only variety. The birds which remain are ravens, magpies, partridges, cross-bills, and wood-peckers. In this universal stillness, the residents at a post feel little disposed to wander abroad, except when called forth by their occupations.

The Crees (*Gallicæ, cris*) Kinistenaux, or as they call themselves, *Naheewawk*, are the nation to which the Cumberland House Indians belong. If affinity of language establishes connexion, we have in our possession a vocabulary of their tongue which incontestibly proves them to belong to the Algonquin, or Chippeway stock, branches of which formerly peopled New England. Their character has been so much modified by intercourse with the English fur traders, that it cannot be said what it was originally. We may say that they are a vain, fickle, improvident, mendacious, indolent people, and moreover great boasters. Indeed this character will apply to all the wild tribes with which we have any acquaintance, and they are not few. Yet must we not judge them strictly: the moral character of a hunter is influenced by the nature of the land he inhabits, by the abundance or scarcity of food, and by the facility of access to ardent spirits; all of which causes operate unfavorably on the *Naheewawk*. We must also bear in mind that

they are a race without any divine rule, real or supposed; without government, and without any restraint excepting that of public opinion. To try their character or conduct, therefore, by our own standard, would be less than justice.

On the other hand, they are scrupulously honest, very hospitable, tolerably kind to their women, capable of friendship, inclined to peace, and susceptible of the kinder affections.

Much of the faulty part of their character originates in their mode of life. Accustomed to depend, in a great measure, upon chance for the means of subsistence, they are consequently indolent. The most offensive trait, boasting, has probably been put on as a kind of natural armor, to operate on the fears of their enemies.

There is little wherein the manners and customs of the Naheewawk differ from those of other tribes of the same stock; and as we have matters of more interest to communicate, we shall not dwell upon them farther.

CHAPTER III.

Snow Shoes.—Dog Sledges.—Travelling Dress.—Mal a Raquette.—Pemican.
—Sagacity of Wolves.—Arrival at Carlton House.—Assinneboins.—
Their War Parties.—Dressing Skins.—A Pound for catching Buffaloes.

CAPTAIN FRANKLIN, as we have said before, started from Cumberland House on the 18th of January. As we shall often have occasion to speak of the

implements of travelling in winter in an Indian country, it may not be amiss to describe them here. A snow-shoe is made of two light bars of wood, fastened together at their extremities, and projected into curves by transverse bars. The side bars have been so shaped by a frame, and dried before a fire, that the front part of the shoe turns up, like the prow of a boat, and the part behind terminates in an acute angle; the spaces between the bars are filled up with a fine netting of leathern thongs, except that part behind the main bar, which is occupied by the feet; the netting is there close and strong, and the foot is attached to the main bar by straps passing round the heel, but only fixing the toes, so that the heel rises after each step, and the tail of the shoe is dragged on the snow. Between the main bar and another in front of it, a small space is left, permitting the toes to descend a little in the act of raising the heel to make the step forward, which prevents their extremities from chafing. The length of a snow-shoe is from four to six feet, and the breadth one foot and a half, or one foot and three quarters, being adapted to the size of the wearer. The motion of walking in them is perfectly natural, for one shoe is level with the snow, when the edge of the other is passing over it. It is not easy to use them among bushes, without frequent overthrows, nor to rise afterwards without help. Each shoe weighs about two pounds, when unclogged with snow. The northern Indian's snow-shoes, differ a little from those of the southern Indians, having a greater curvature on the outside of

each shoe ; one advantage of which is, that when the foot rises the overbalanced side descends and throws off the snow. All the superiority of European art has been unable to improve the native contrivance of this useful machine.

Sledges are made of two or three flat boards, curving upwards in front, and fastened together by transverse pieces of wood above. They are so thin that, if heavily laden, they bend with the inequalities of the surface over which they pass. The ordinary dog-sledges are eight or ten feet long and very narrow, but the lading is secured to a lacing round the edges. The cariole used by the traders is merely a covering of leather for the lower part of the body, affixed to the common sledge, which is painted and ornamented according to the taste of the proprietor. Besides snow-shoes, each individual carries his blanket, hatchet, steel, flint, and tinder, and generally fire-arms.

The general dress of the winter traveller is a *capot*, having a hood to put up under the fur cap in windy weather, or in the woods, to keep the snow from his neck ; leathern trowsers and Indian leggins, which are closed at the ankles, round the upper part of his *moccasins*, or Indian shoes, to prevent the snow from getting into them. Over these he wears a blanket, or leathern coat, which is secured by a belt round his waist, to which his fire-bag, knife, and hatchet are suspended.

Sledges are usually drawn by three dogs, and at the commencement of a journey, carry three hundred pounds, which load, however, undergoes a

daily diminution from the consumption of provisions. The sledge, with its tackle, weighs about thirty pounds, and thus laden, the rate of travelling is about three miles an hour.

At night, Captain Franklin 'encamped' after the manner of the north; that is, his people cleared a small spot of its snow, built a huge fire, before which, after supping, the party slept. In such encampments it is necessary to hang sledges on trees, out of the reach of the dogs, lest they should eat the tackle.

The course of the party lay up the Saskatchewan, and they made but slow progress through the deep snow. The task of beating the track for the dogs was so fatiguing, that the men took it by turns, at intervals of an hour and a half. By the evening of the 20th, Capt. Franklin had experience of one not the least of the hardships of winter travelling, viz. what is called the *mal a raquette*, or snow-shoe pain. This is caused by the irritation of the tendons of the upper part of the foot, caused by the weight of the snow-shoe. This is an evil which few of the uninitiated escape, and which excites no commiseration in the experienced voyageurs, who think of it as sailors do of sea sickness. Nevertheless, the pain is almost enough to bring down the fortitude of the bravest.

The usual food of the voyageurs, on such journeys, is pemican, which is made in the following manner. Meat is cut into thin slices, and dried. It is then broken into small fragments, and pulverised, or nearly so, with a pestle. It is then mixed

in equal parts with tallow or marrow fat, crammed into a parchment bag, and pounded hard. It is a convenient and nutritious food, and when well prepared will keep upwards of two years.

On the 25th, the party passed the remains of two elks, lying at the bases of perpendicular cliffs over which they had probably been driven by wolves. These voracious animals, who are inferior in speed to the moose or red-deer, are said frequently to have recourse to this expedient in places where extensive plains are bounded by precipitous cliffs. While the deer are quietly grazing, the wolves assemble in great numbers, and, forming a crescent, creep slowly towards the herd so as not to alarm them much at first, but when they perceive that they have fairly hemmed in the unsuspecting creatures, and cut off their retreat across the plain, they move more quickly and with hideous yells terrify their prey, and urge them to flight by the only open way, which is that towards the precipice; appearing to know that when the herd is once at full speed, it is easily driven over the cliff, the rearmost urging on those that are before. The wolves then descend at their leisure, and feast on the mangled carcasses.

In the evening of the 26th, the travellers put up at Upper Nippeween, a deserted trading house, where they washed and shaved, for the first time since leaving Cumberland House. They passed an uncomfortable and sleepless night, and agreed thenceforth to encamp in the open air, as preferable to the shelter of a deserted house without

doors or windows. In the course of the next day they passed the confluence of the south branch of the Saskatchewan, which rises in the Rocky Mountains near the sources of the Missouri. They then passed the ruins of a house which the traders had been compelled to abandon on account of the intractable conduct and pilfering habits of the Assiniboins. They moreover learned from the voyageurs that all the residents of a house near the spot had been cut off by the same Indians a few years before. At night, the wolves serenaded them, as usual, and Mr Back was more seriously disturbed. His buffalo robe took fire, and the shoes on his feet were so much contracted by the heat, and gave him so much pain, that he was obliged to jump up and run into the snow for relief.

On the 30th, they reached the beginning of the Barren Grounds, above which both banks of the river are bare. Vast prairies extend behind the southern bank, affording excellent pasturage for the Buffalo, a herd of which were seen. By this time their provisions were expended, and they were, therefore, very happy to reach Carlton House the next day at noon, where they were kindly received and hospitably entertained by Mr Prudens, the trader.

Here Captain Franklin had an opportunity to see some Assiniboins, or in their own tongue, Hohays. Their countenances are affable and pleasing, their eyes large and expressive, nose aquiline, teeth white and regular, the forehead bold, the cheek-bones rather high. Their figure is usually

good, above the middle size, with slender, but well-proportioned limbs. Their color is a light copper, and they have a profusion of very black hair, which hangs over the ears, and shades the face. Their dress, which is extremely neat and convenient, consists of a shirt and leggins of leather; over these a buffalo robe is thrown gracefully. These dresses are in general cleaned with *white mud*, a sort of marl, though some use *red earth*, a kind of bog-iron-ore; but this color neither looks so light, nor forms so agreeable a contrast as the white with the black hair of the robe. Their quiver hangs behind them, and in the hand is carried the bow, with an arrow, always ready for attack or defence, and sometimes they have a gun: they also carry a bag, containing materials for making a fire, some tobacco, the calumet or pipe, and whatever valuables they possess. This bag is neatly ornamented with porcupine quills. Thus equipped, the Stone Indian bears himself with an air of perfect independence.

The Stone Indians steal whatever they can, particularly horses: these animals they maintain are common property, sent by the Almighty for the general use of man, and therefore may be taken wherever met with; still they admit the right of the owners to watch them, and to prevent theft if possible. This avowed disposition on their part calls forth the strictest vigilance at the different posts; notwithstanding which the most daring attacks are often made with success, sometimes on parties of three or four, but oftener on individuals. About two years ago, a band of them had the audacity to

attempt to take away some horses which were grazing before the gate of the Northwest Company's fort; and, after braving the fire from the few people then at the establishment through the whole day, and returning their shots occasionally, they actually succeeded in their enterprise. One man was killed on each side. They usually strip defenceless persons whom they meet, of all their garments, but particularly of those which have buttons, and leave them to travel home in that state, however severe the weather. If resistance be expected, they not unfrequently murder before they attempt to rob. The traders, when they travel, invariably keep some men on guard to prevent surprise, whilst the others sleep; and often practise the stratagem of lighting a fire at sunset, which they leave burning, and move on after dark to a more distant encampment—yet these precautions do not always baffle the depredators. Such is the description of men whom the traders of this river have constantly to guard against.

These parties go to war almost every summer, and sometimes muster three or four hundred horsemen on each side. Their leaders, in approaching the foe, exercise all the caution of the most skilful generals; and whenever either party considers that it has gained the best ground, or finds it can surprise the other, the attack is made. They advance at once to close quarters, and the slaughter is consequently great, though the battle may be short. The prisoners of either sex are seldom spared, but slain on the spot with wanton cruelty. The dead

are scalped, and he is considered the bravest person who bears the greatest number of scalps from the field. These are afterwards attached to his war dress, and worn as proofs of his prowess. The victorious party, during a certain time, blacken their faces and every part of their dress, in token of grief for their slain; and in that state they often come to the establishment, if near, to signify their success by dancing and singing, bearing all the horrid insignia of war, to display their individual feats.

There were also a band of Naheecowawk encamped at Carlton House, and Captain Franklin had occasion to observe, what we have often remarked, that the greater proportion of the labor of savage life falls on the women. He saw them employed in dressing skins, and conveying wood, water, and provision. As they have often to fetch the meat from some distance, they are assisted in this duty by their dogs, which are not harnessed in sledges, but carry their burthens in a manner peculiarly adapted to this level country. Two long poles are fastened by a collar to the dog's neck; their ends trail on the ground, and are kept at a proper distance by a hoop, which is lashed between them, immediately behind the dog's tail; the hoop is covered with net-work, upon which the load is placed.

There was also another object of interest close by; a pound for catching buffaloes. It was a fenced circular space, of about a hundred yards in diameter; the entrance was banked up with snow,

to a sufficient height to prevent the retreat of the animals that once have entered. For about a mile on each side of the road leading to the pound, stakes were driven into the ground, at nearly equal distances, of about twenty yards; these were intended to represent men, and to deter the animals from attempting to break out on either side. Within fifty or sixty yards from the pound, branches of trees were placed between these stakes to screen the Indians, who lie down behind them to await the approach of the buffalo.

The principal dexterity in this species of chase is shown by the horsemen, who have to manœuvre round the herd in the plains, so as to urge them to enter the roadway, which is about a quarter of a mile broad. When this has been accomplished, they raise loud shouts, and, pressing close upon the animals, so terrify them that they rush heedlessly forward towards the snare. When they have advanced as far as the men who are lying in ambush, these also rise, and increase their consternation by violent shouting, and firing guns. The affrighted beasts having no alternative, run directly to the pound, where they are quickly despatched, either with arrows or guns.

There was a tree in the centre of the pound, on which the Indians had hung strips of buffalo flesh, and pieces of cloth, as tributary or grateful offerings to the Great Master of Life; and we are informed that they occasionally place a man in the tree, to sing to the presiding spirit, as the buffaloes are ad-

vancing, who must keep his station until the whole that have entered are killed. This species of hunting is very similar to that of taking elephants, on the island of Ceylon, but upon a smaller scale.

CHAPTER IV.

Running the Buffalo.—Still Hunting.—Carlton House.—Goitres.—A Dead Body.—Isle a la Crosse.—Buffalo Lake.—Pierre au Calumet.—Arrival at Fort Chippewyan.—Return of Spring.

BESIDE the pound there are other ways of taking the Buffalo, all practised by such Indians as live in the prairies and ride on horseback. Of these, hunting on horseback requires most courage and dexterity. An expert hunter, when well mounted, dashes at the herd, and chooses an individual, which he endeavours to separate from the rest. If he succeeds, he contrives to keep them apart, by the proper management of his horse, though going at full speed. Whenever he can get sufficiently near for a ball to penetrate the beast's hide, he fires, and seldom fails of bringing the animal down; though of course he cannot rest the piece against the shoulder, nor take a deliberate aim. On this service, the hunter is often exposed to considerable danger, from the fall of his horse in the numerous holes which the badgers make in these plains, and also from the rage of the buffalo, which, when closely pressed, often turns suddenly, and, rushing furiously on the horse, frequently succeeds in wound-

ing it, or dismounting the rider. Whenever the animal shows this disposition, which the experienced hunter will readily perceive, he immediately pulls up his horse, and goes off in another direction.

When the buffaloes are on their guard, horses cannot be used in approaching them; but the hunter dismounts at some distance, and crawls in the snow towards the herd, pushing his gun before him. If the buffaloes happen to look towards him, he stops, and keeps quite motionless, until their eyes are turned in another direction; by this cautious proceeding a skillful person will go so near as to be able to kill two or three out of the herd. It will easily be imagined this service cannot be very agreeable, when the thermometer stands at 30° or 40° below zero, as sometimes happens in this country.

The buffalo or bison is a huge and shapeless animal, quite devoid of grace or beauty; particularly awkward in running, but by no means slow; when put to his speed, he plunges through the deep snow very expeditiously: the hair is dark brown, very shaggy, curling about the head, neck, and hump, and almost covering the eye, particularly in the bull, which is larger and more unsightly than the cow. The most esteemed part of the animal is the hump, called by the Canadians *bosse*, by the Hudson's Bay people the *wig*; it is merely a strong muscle, on which nature at certain seasons forms a considerable quantity of fat. It is attached to the long spinous processes of the first dorsal vertebræ, and seems to be destined to support the enormous

head of the animal. The meat which covers the spinal processes themselves, after the wig is removed, is next in esteem for its flavor and juiciness, and is more exclusively termed the hump by the hunters.

Carlton House is in $52^{\circ} 50' 47''$ N. latitude, and $106^{\circ} 12' 42''$ W. longitude. It is pleasantly situated about a quarter of a mile from the river, on flat ground under the shelter of the high banks which bound the plains. The soil is good, and, with little trouble, produces ample returns of wheat, barley, oats and potatoes. With the bank behind the house commences the prairie which extends to Mexico and the Rocky Mountains. Carlton House is a provision post, for the supply of other places, and few furs are collected there. There are more such establishments farther up the river, at one of which (Edmonton) almost all the residents are afflicted with bronchocele, or goitres. This disorder attacks all who drink the water of the river, though farther down it is known only by name. A great proportion of the children born of women with goitres are idiots. It may not be improper to state here that the same disease prevails at Detroit in Michigan, where it is mostly confined to females.

Isle a la Crosse was the next stage of the journey to Athabasca; and having recovered from the pains and fatigues of the march, the party started from Carlton House on the 8th of February. For the first two days their route lay across an unvaried level, destitute of wood. On the second afternoon, they crossed three small lakes, two of fresh water,

and one of salt. By this last was an elevation, covered with poplars, willows and pines, at the foot of which they encamped. Here they saw a large herd of elks.

The next day there was an agreeable variety of hill and dale, with enough wood for ornament. The valleys were intersected by small lakes and ponds, whose white covering happily contrasted with the dark green of the pines which surrounded them. Towards night, they crossed Lake Iroquois, and encamped on its beautiful shore.

The next day they struck into a beaten path, which brought them to the remains of an Indian hut. Close to this ruin was a great pile of wood, which the voyageurs supposed to cover a deposit of provisions. They removed the upper pieces, and to their surprise found the body of a squaw, apparently recently placed there. Her garments, the materials for striking fire, a fishing-line, a hatchet, and a bark dish were laid beside her. The wood was carefully replaced.

The next evening the party reached Stinking Lake, in latitude $53^{\circ} 25'$, and longitude $107^{\circ} 18'$. It is of an oval form, and its shores are low and swampy; to which it owes its name, and not to any bad quality of its waters. The day after, the route lay over ranges of hills so thickly covered with firs, birches, and poplars, that it was with great difficulty the sledges passed between them. On the 15th, they reached Pelican Lake, which is eight miles long and six broad. Thence the view to the right is bounded by a range of lofty hills. The 17th

brought them to a trading-house on Green Lake. Green Lake is eighteen miles long, and does not exceed a mile and a half in breadth in any part. The waters are deep, and abound in trout and tittameg.

Here the Captain remained two days, and then pushed on, and after crossing several more lakes and rivers, arrived on the 24th, at the trading-house on Isle a la Crosse Lake, which derives its name from an island, on which the Indians formerly used to play a game of ball called La Crosse. It is celebrated in the north for the abundance and quality of its fishes. It lies in latitude $55^{\circ} 25'$, and longitude $107^{\circ} 51'$.

On the 5th of March, the travellers resumed their journey, and in two days reached a trading-house on Buffalo Lake. On the 11th, they came to another establishment on Lake Methye, where they were, as usual, well received.

This is a beautiful sheet of water, ten miles long and six broad, and derives its name from a species of fish caught in it, but not esteemed; for the residents never eat any part of it but the liver: the dogs reject even that. Capt. Franklin ascertained that the position of the houses was in latitude $56^{\circ} 24'$ and longitude $109^{\circ} 23'$.

The places next in order on the route of our travellers were, the Methye Portage, Pine Portage, and Cascade Portage, the latter of which is the last on the way to Athabasca. Here they found five lodges of Chippewyans, very poor and miserable. They had lately lost several of their

relatives, and according to the custom of almost all Indian tribes had given away all their property, and destroyed their clothes and tents, in token of grief. This accounted for their forlorn appearance.

On the 17th, the party came to the junction of the Pembina with the Athabasca river. The western shore near the Forks is destitute of trees, and is composed of lofty perpendicular cliffs. A few pines are the only trees on the eastern shore. On the 18th, they reached a trading-house at Pierre au Calumet, where they remained till the 22d. This place receives its name from the stone there procured, of which the Indians make their pipes. It is in latitude $57^{\circ} 24'$. Mr Stuart, the person in charge of the trading-house, kept a register of the weather, from which it appeared that the lowest temperature observed that winter at Pierre au Calumet was -43° and he informed Capt. Franklin that he had never known it lower than -45° at Lake Athabasca, or Great Slave Lake.

On the 23d, the party overtook an old Canadian who was conveying meat from some Indian lodges to Fort Chippewyan. He had on his sledge a burthen of two hundred and fifty pounds, which was drawn by two miserable dogs. The travellers were much amused by an altercation which took place between him and their own voyageurs, about the merits of their respective dogs. The old man offered to bet the whole of his wages that his two dogs, poor and lean as they were, would drag their load to Athabasca in less time than any three of theirs. In explanation, he said that he depended

on his skill in driving, and gave them to understand that the voyageurs of Athabasca consider themselves greatly superior to any others.

Having now the guidance of the old Canadian, Capt. Franklin sent two of his party forward, with letters for Athabasca. On the 25th, at ten, A. M. he entered the river Embarras, the channel by which canoes usually enter the Lake. It is a narrow, serpentine stream, running between alluvial banks, which afford nourishment to pines, poplars and willows. He had not advanced far, when he overtook the two men despatched in advance;—stormy weather had compelled them to encamp, as the snow drifted too much to permit them to attempt to cross the Lake. Capt. Franklin was obliged to follow their example, and was detained the rest of the day.

The weather moderated in the night, and the next morning the party arrived at Mamma-wee Lake. At four, P. M. they reached Fort Chippewyan, on Athabasca Lake. Thus terminated a winter journey of eight hundred and fiftyseven miles, attended by many disagreeable circumstances, not the least of which was the *mal a raquette*. The next evil was, being obliged to witness the wanton and unnecessary cruelty of the Canadians to their dogs, which were beaten unmercifully. There were other inconveniences, which were, however, speedily forgotten, when they had found a hearty welcome at Fort Chippewyan.

Here Capt. Franklin's first object was to obtain information respecting his future route; and Beau-

lieu, a man who had been brought up among the Copper and Dog Rib Indians, was found capable to furnish it. An old Chippewyan, named Black Meat, also contributed his stock of knowledge, which was afterwards found to be tolerably correct. He described two rivers, which run east of the Copper Mine, and fall into the northern ocean, viz. the Anateussy, which issues from the Contwayto, or Rum Lake, and the Thlouceatessy, or Fish River, which rises near the eastern boundary of Great Slave Lake. He represented them both as shallow—too much so for navigation in canoes. Capt. Franklin then wrote to the traders of Great Slave Lake to communicate the object of his journey, and to request information and assistance; and farther, desired them to communicate his intentions to the Copper Indians, and to engage some of them as guides and hunters.

There was little appearance of returning spring till the 8th of April, when some wild fowl were seen flying northward. In the middle of the month, the snow began to waste, and by degrees it disappeared from the hills and the surface of the Lake. On the 21st, geese were killed, and four days after, flies were seen sporting in the sunshine. On the 26th, the ice in the Athabasca river broke up, but there was no appearance of decay in that of the Lake.

By the 10th of May, the trees began to put forth their leaves, and early flowers appeared. The musquitoes began to be troublesome, yet the ice still held fast. On the 17th and 18th, there were show-

ers of rain with thunder and lightning. On the 24th, the ice broke up and utterly disappeared, and traders from the different posts in the department arrived at Fort Chippewyan with their cargoes of furs.

CHAPTER V.

News from Great Slave Lake.—Voyageurs engaged.—Fort Chippewyan.—Lake of the Hills.—Chippewyan Tribe.—Their Dress.—Character.—Vanity.—Opinions.—Customs.—Abandonment of their Sick.—A Birch Canoe.

ON the 3d of June, Capt. Franklin received from Great Slave Lake the welcome tidings that the principal Chief of the Copper Indians had heard the news of his arrival in the country with joy, and had promised that he would accompany the expedition, with a party of his people. This promise he had given at the instance of Mr Wentzel, a trader, who he wished might accompany him. These Indians were to wait at Fort Providence, on the northern shore of Slave Lake, for Capt. Franklin's arrival. The Captain, therefore, had no doubt of being able to obtain provisions on his journey; and this agreeable intelligence had such an effect on the Canadian voyageurs, that several of them now seemed disposed to offer their services.

On the 5th of June, six Canadians were engaged to accompany the expedition. The bowman and steerman (the two most important hands) were to

receive wages at the rate of sixteen hundred livres Halifax per annum, and the rest twelve hundred. It was moreover stipulated that their pay should continue until their arrival at Montreal, or till they resumed the service of their present employers.

Fort Chippewyan, the principal post of the Hudson's Bay Company in this department, is conveniently situated to command Slave and Peace Rivers, whence the traders' canoes assemble in spring and autumn. On the first occasion they bring the furs collected during the winter, and on the latter they receive the merchandise destined for the Indians. Fort Chippewyan is an ancient establishment and stands on a rocky point of the northern shore, and has a tower which may be seen at a great distance. This addition was made for the purpose of watching the Indians, who, several years ago, were instigated by one of their pretended prophets to destroy the traders, but by great vigilance on the part of the whites, their design was frustrated.

That part of this extensive lake which is near the fort is, not improperly, called The Lake of the Hills. The northern shore and the islands are high and rocky. The southern shore is quite level, consisting of alluvial land which is liable to be flooded, lying between the different mouths of Elk River. The rocks of the northern shore are of sienite, covered with a thin soil, sufficient to support a variety of firs and poplars, as well as shrubs, lichens, and mosses. Some of the hills are five or six hundred feet high, within a mile of the fort, and from their summits is a very fine view of the lake

and the surrounding country. The land above the confluence of the Elk and main rivers, is of about the same height, and stretches southerly behind Pierre au Calumet. Opposite that establishment, on the western side of the river, is the Black Mountain, whence the Crees obtain their provisions and bark for their canoes. On the southern shore there is another range of hills, which runs toward Peace River.

The residents of Fort Chippewyan depend almost entirely for subsistence on the fishes which the lake affords, and which are caught in sufficient abundance during the winter; but when the ice breaks up, they remove into the smaller lakes and the rivers on the southern shore. They are *attihawmegh*, trout, carp, pike, and *methye*. The hunters also supply buffalo and moose meat, which is mostly converted into pemican, for the use of the voyageurs when travelling. This season there was an unusual scarcity.

At the opening of the waters in spring, the Indians resort to the trading-houses to settle their accounts and procure necessities, which assemblage was formerly attended by much riot and confusion, occasioned by the free use of ardent spirits. We are happy to state that these are no longer used by the Hudson's Bay Company as an article of trade.

The Indians belong to the great Chippewyan or northern family; dialects of their language being spoken on the Peace and Mackenzie's Rivers, and also by the tribes of New Caledonia, as ascertained by Sir Alexander Mackenzie. They call them-

selves *Dinneh* men, or Indians, but each horde has some distinctive epithet beside; for instance, those who trade at Fort Chippewyan are called Indians of the Rising Sun, their original territory being between Athabasca and Great Slave Lakes and Churchill River. This country is frequented by reindeer, which furnish the Indians with subsistence and clothing. There are about an hundred and sixty hunters who carry their furs to Great Slave Lake, forty to Hay River, and two hundred and forty to Fort Chippewyan.

They are a people by no means prepossessing in their appearance. They have broad faces, projecting cheek-bones, and wide nostrils; but they also generally have fine teeth and eyes. Their dress consists of a leathern hunting-shirt and leggins, over which a blanket is thrown, and a fur cap, or band, on the head. Their manner is reserved, and their habits are selfish and beggarly; they are unceasingly importunate for everything they see. They give and receive with equal ill grace, snatching a thing in the one instance, and throwing it at you in the other. Neither do they practise that hospitality which strikes a stranger so favorably among other Indians. A traveller may leave their lodges hungry, unless he has sufficient assurance to help himself from the kettle uninvited; in which case the owner only notices the rudeness by a frown, as he considers it beneath his dignity to make disturbance about a piece of meat.

It should be stated, as some relief to the dark shades of their character, that instances of theft are

very rare among them. They are affectionate to their children, and profess some regard for their relatives, who are numerous, as they trace consanguinity very far.

They decline to pitch their tents where their relations have died, for fear of being reminded of their loss and of the happy hours they have spent there; but the change of situation does not always obliterate sorrowful impressions. They will sit without their tents in groups, and give vent to their grief in loud lamentations. In cases of sickness, they resort to the medicinal powers of singing and drumming, and to conjurations. The conjurors are very assiduous and suffer great personal fatigue on such occasions.

The chiefs have no power whatever, and receive no respect or obedience excepting from the youths of their own families. This is owing to the fact that their tribe is at peace with all the world, and because the young men can get what they want without their assistance.

The Northern Indians evince no little vanity, by assuming to themselves the comprehensive title of 'The People,' whilst they designate all other nations by the name of their particular country. If men were seen at a distance, and a Chippewyan was asked who those persons were, he would answer, The People, if he recognised them to belong to his tribe, and never Chippewyans; but he would give them their respective names, if they were Europeans, Canadians, or Cree Indians. As they suppose that their ancestors came originally from the

east, those who happen to be born in the eastern part of their territory are considered of the purest blood. All the savages of this quarter, excepting the Dog Ribs, impute to themselves an eastern origin.

The Chippewyans are considered to be less expert hunters than the Crees, which probably arises from their residing much on the barren lands, where the reindeer are so numerous that little skill is requisite. A good hunter, however, is highly esteemed among them. The facility of procuring goods, since the commercial opposition commenced, has given great encouragement to their native indolence of disposition, as is manifested by the difference in the amount of their collections of furs and provision between the late and former years. From six to eight hundred packs of furs used formerly to be sent from this department; now the return seldom exceeds half that amount. The decrease in the provision has been already mentioned.

The Northern Indians suppose that they originally sprang from a dog; and about five years ago, a superstitious fanatic so strongly pressed upon their minds the impropriety of employing this animal, to which they were related, for purposes of labor, that they universally resolved against using dogs any more, and, strange as it may seem, destroyed all they had. They have now to drag everything themselves, on sledges. This laborious task falls most heavily on the women; nothing can more shock the feelings of a person accustomed to civilized life, than to witness the state of their degrada-

tion. When a party is on a march, the women have to drag the tent, the meat, and whatever the hunter possesses, whilst he only carries his gun and medicine bag. In the evening they form the encampment, cut wood, fetch water, and prepare the supper; and then, perhaps, are not permitted to partake of the fare until the men have finished. A successful hunter sometimes has two or three wives; whoever happens to be the favorite assumes authority over the others, and has the management of the tent. These men usually treat their wives unkindly, and even with harshness; except, indeed, when they are about to increase the family, and then they show them much indulgence.

Hearne charges the Chippewyans, with the dreadful practice of abandoning, in extremity, their aged and sick people.

One instance only came under the observation of Captain Franklin, which was attended by palliating circumstances. An old woman and a boy ten years old arrived at Fort Chippewyan, who had been left in their camp by their people when much reduced by sickness. Two or three days after their departure the woman gained a little strength, and was able, with the assistance of the boy, to paddle a canoe to the post, where they were supported till enabled to go in search of some other relation who, they expected, would treat them more kindly. It afterwards appeared that the woman bore a very bad character, having been guilty of infanticide, and that her companions thought her offences merited the desertion.

This tribe entertain the most inveterate hatred toward the Esquimaux, though since their present intimate connexion with the traders, they have discontinued their war excursions against them.

The weather was extremely variable in the month of June, and the musquitoes swarmed about the house, inflicting so much pain on its inmates that they were compelled to keep their rooms constantly filled with smoke, as the only means of driving them away. On the 2d of July, the canoe intended for the use of the expedition was finished; and as it was like those used by Indians and Indian traders all over the north and northwest, a description may not be deemed out of place here. Its extreme length was thirtytwo feet six inches, including the bow and stern pieces, its greatest breadth was four feet ten inches; but it was only two feet nine inches forward, where the bowman sat, and two feet four inches behind, where the steersman was placed; and its depth was one foot eleven and a quarter inches. There were seventy-three hoops of thin cedar, and a layer of slender laths of the same wood within the frame. These feeble vessels of bark will carry twentyfive pieces of goods, each weighing ninety pounds, exclusive of the necessary provisions and baggage for the crew of five or six men, amounting in the whole to about three thousand three hundred pounds' weight. This great lading they annually carry between the depots and the posts, in the interior; and it rarely happens that any accidents occur, if they be managed by experienced bowmen and steersmen, on

whose skill the safety of the canoe entirely depends in the rapids and difficult places. When a total portage is made, these two men carry the canoe, and they often run with it, though its weight is estimated at about three hundred pounds, exclusive of the poles and oars, which are occasionally left in where the distance is short.

CHAPTER VI.

An Accident.—Arrival of Dr Richardson.—Arrangements for Departure.—Departure.—Portages.—A Buffalo killed.—The Party arrive at Great Slave Lake.—At Fort Providence.—Conference with Akaitcho.

ON the 7th of July, some men and their families who had been sent off to search for Indians with whom they intended to pass the summer, returned to the fort, in consequence of a serious accident having befallen their canoe in the Red Deer River; when they were in the act of hauling up a strong rapid, the line broke, the canoe was overturned, and two of the party narrowly escaped drowning; fortunately the women and children happened to be on shore, or, in all probability, they would have perished in the confusion of the scene. Nearly all their stores, their guns, and fishing-nets, were lost, and they could not procure any other food for the last four days than some unripe berries.

On the 13th, the party at Fort Chippewyan had the pleasure to welcome their long separated friends,

Dr Richardson and Mr Back, who it will be remembered, had been left at Cumberland House. They arrived in perfect health, having made a very expeditious journey in two canoes, notwithstanding a detention of three days, in consequence of the melancholy death of one of their bowmen, by the upsetting of one of their canoes in a rapid. These gentlemen had brought all the stores they could procure at Cumberland and Isle a la Crosse, though these were very scanty. The prospect of commencing so long a journey, almost destitute of provisions and stores, was distressing to the officers, and discouraging to the men; but it was evident that any delay would be very imprudent, as Fort Chippewyan could not furnish subsistence for so large a party. They therefore hastened the arrangements for a speedy departure. A final arrangement was made respecting the voyageurs who were to accompany the party, in which there was no difficulty, as ten Canadians, brought by Dr Richardson from Cumberland were desirous to proceed. When the number was completed, Capt. Franklin had sixteen Canadians, and a worthy English seaman, John Hepburn by name, beside two interpreters whom he was to receive at Great Slave Lake. An equipment of necessary articles was given to each man engaged, and the remaining goods were made up in bales.

On the 18th, the party started from Fort Chippewyan, and at two, P. M., entered Stony River, one of the discharges of Lake Athabasca into Slave River. This narrow stream is confined between

low, swampy banks, covered with willows, dwarf birch and alder. At five they passed its confluence with Peace River. The Slave, formed by the union of these two, is about three quarters of a mile wide. They descended this great stream with much rapidity, and, after passing through several narrow channels, crossed a spot where the waters had a violent whirling motion with no other inconvenience than an inability to steer the canoes, which were whirled about in every direction by the eddies, till the current swept them beyond the sphere of their influence. They encamped at seven on the bank.

At ten the next morning they reached the mouth of Dog River, where they halted to fish, but in vain. The day after, in passing a rapid, two of the canoes came in such violent contact that one of them had her bow broken off. This injury being repaired in two hours, they next passed a portage of four hundred yards, and afterwards two more. At the latter of these, as the men were carrying the canoes over, they let one of them fall, and it was broken in two. Two hours passed in sewing the shattered pieces together, and covering the seams with pitch, rendered it as efficient as ever. Such are these frail vehicles; very easily broken, and almost as easily repaired. After this, they passed four more portages, including the last on the way to Great Slave Lake. At the foot of this they encamped. It is called *The Portage of the Drowned*, from an accident which had taken place some years before, and which we shall relate here. Two canoes arrived at the up-

per end of the portage, in one of which there was an experienced guide. This man, judging from the height of the river, deemed it practicable to shoot the rapid, and determined upon trying it. He accordingly placed himself in the bow of his canoe, having previously agreed, that if the passage was found easy, he should, on reaching the bottom of the rapid, fire a musket, as a signal for the other canoe to follow. The rapid proved dangerous, and called forth all the skill of the guide, and the utmost exertion of his crew, and they narrowly escaped destruction. Just as they were landing, an unfortunate fellow, seizing the loaded fowling-piece, fired at a duck which rose at the instant. The guide, anticipating the consequences, ran with the utmost haste to the other end of the portage, but he was too late; the other canoe had pushed off, and he arrived only to witness the fate of his comrades. They got alarmed in the middle of the rapid, the canoe was upset, and every man perished.

The portages and rapids passed this day are occasioned by an assemblage of islands and rocky ledges which obstruct the river, and divide it into many narrow channels, two of which are rendered still more difficult by an accumulation of drift timber. The rocks which form the bed of the stream and the numerous islands are granite. The distance made this day was thirteen miles.

The next day passed without adventure, unless seeing several salt springs be such; but in the morning of the 22d, as the canoes turned a point, a buffalo plunged into the river before them. A fire

was opened upon him from four muskets, and he fell, but not before he had received fourteen balls in his body. The canoes were speedily supplied with meat; and after this good fortune the voyageurs paddled merrily onward, keeping time to their gayest songs. This supply enabled them to proceed without delay to Slave Lake.

On the 24th, they passed the mouth of a broad channel leading to the north-east, termed La Grande Riviere de Jean, one of the two large branches by which the river pours its waters into Slave Lake. The flooded delta at the mouth of the river is intersected by several smaller channels, through one of which the expedition passed, and by eight, A. M. reached an establishment of the Northwest Company on Moose-Deer Island, in Slave Lake. Here Capt. Franklin engaged Pierre St Germain, who spoke the language of the Copper Indians, as an interpreter, and also obtained a considerable supply of provision.

Moose-Deer Island is about a mile in diameter, and rises towards the centre about three hundred feet above the lake. Its soil is in general sandy, in some parts swampy. The varieties of the northern berries grow abundantly on it. The Northwest Company's Fort is in latitude $61^{\circ} 11' 8''$ N.; longitude $113^{\circ} 51' 37''$ W., being two hundred and sixty statute miles distant from Fort Chippewyan, by the river course. The variation of the compass is $25^{\circ} 40' 47''$ E. The houses of the two Companies are small, and have a bleak northern aspect. There are vast accumulations of drift wood on the shores

of the lake, brought down by the river, which afford plenty of fuel. The inhabitants live principally on the fish, which the lake at certain seasons furnishes in great abundance; of these, the white fish, trout, and *poisson inconnu* are considered the best. They also procure moose, buffalo, and reindeer meat occasionally from their hunters; but these animals are generally found at the distance of several days' walk from the forts. The Indians who trade here are Chippewyans. Beavers, martens, foxes, and musk-rats, are caught in numbers, in the vicinity of this great body of water. The mosquitoes here were still a serious annoyance, but less numerous than before. They were in some degree replaced by a small sand-fly, whose bite is succeeded by a copious flow of blood, and considerable swelling, but is attended with incomparably less irritation than the puncture of the mosquito.

On the 27th, the party set forward again, and proceeded along the south shore of the lake to Stony Island, where they breakfasted. This isle is merely a rock of gneiss, which rises forty or fifty feet from the water. As the day was fine, they then ventured to paddle across, in a northern direction to the Rein-Deer Islands, distant thirteen miles, and reached them in safety. These islands consist of granite, and are from one to two hundred feet high. They are for the most part naked, but on the larger ones there is a little soil, and a few groves of pines. The party encamped on one of them. The next day they ran for some hours before a strong breeze and a heavy swell, till they were obliged to seek shelter on an island.

In the afternoon, the wind and swell subsided, and they pursued their course to the Big Island of Mackenzie, and the next morning reached Fort Providence. Here they found Mr Wentzel, the interpreter Adam, and an Indian guide, waiting their arrival. Immediately on landing, the Indians were apprised of their coming, by a fire on the top of a neighbouring hill.

Mr Wentzel gave Capt. Franklin all the information he had received from the Indians. The duties allotted to this gentleman were, the management of the Indians, the superintendence of the voyageurs, and the obtaining and general distribution of provisions and stores. As he had been accustomed to execute similar services for twenty years, he was well qualified to perform these duties.

In order to receive Akaitcho and his followers, the officers arrayed themselves in their uniforms, well knowing that with these people much depends on appearances. On landing, the chief walked up to Mr Wentzel in a grave and dignified manner, looking neither to the right nor to the left till he reached the hall, where he was introduced to the officers. He said he was rejoiced to see such great chiefs on his lands; his tribe was poor, but he loved white men, and hoped their arrival would greatly benefit his people. The only material point in his harangue was, that he was ready to fulfil his engagements, and accompany the expedition.

In reply to this speech, Capt. Franklin explained the objects of his mission, in the manner best calculated to insure his cooperation. He said that the

greatest chief in the world, who was the sovereign of all the traders, having learned that his red children were in want of many articles, in consequence of the difficulty and delay of transportation, had sent him in search of a passage by sea, by which large quantities of goods might be brought. He said he was desirous of the aid of the Indians, as guides and hunters; and finally, he was enjoined by the great chief to recommend that all hostilities should cease throughout the country, particularly between the Indians and the Esquimaux, whom he considered as his children, in common with the other natives. By way of enforcing this last point, the captain assured him that if any quarrel arose between his people and the Esquimaux, the consequence would be the forfeiture of all advantages to be derived from the expedition.

The chief, whose name was Akaitcho, or Big Foot, replied by a renewal of his assurances that he would attend the party to the end of their journey, and would do his utmost to provide the means of subsistence. He admitted that his tribe had made war on the Esquimaux, but said that they were now desirous of peace, and added, that as the Esquimaux were very treacherous, he recommended much caution in dealing with them.

CHAPTER VII.

Akaitcho.—Preparations for the Journey.—Fort Providence.—Journey up Yellow Knife River.—Want of Food.—Yellow Knife River.—Mutiny of the Voyageurs.—The Party reach their Winter Quarters.—Conduct of Akaitcho.—Departure of Messrs Back and Hood.

WHEN Akaitcho and his people had communicated all the information they possessed, Captain Franklin presented them with medals, informing them that these were tokens of friendship and pledges of sincerity. This donation being made in the presence of all the hunters, was highly satisfactory to them, but they avoided all demonstrations of joy, considering them derogatory to their dignity. During the whole of the interview, the chief evinced much penetration, and impressed the officers with a very favorable opinion of his intellectual powers. A quantity of goods was presented to him, and he retired with his people to make the necessary preparations to commence the journey on the morrow.

On the 1st of August, the Indians started, intending to wait for the party at the mouth of Yellow Knife River. The whites remained, to pack their stores in bales of eighty pounds each. These consisted of gunpowder, lead, guns, pistols, knives, tools of various kinds, articles of merchandize for the Indians and Esquimaux, nets and fishing-lines, and provisions for ten days consumption. When all was ready, the party consisted of twentyeight persons, including the wives of three of the voya-

geurs, who were brought for the purpose of making clothes and mocasins at the winter establishment.

Fort Providence is in latitude $62^{\circ} 17'$ and longitude $114^{\circ} 9'$. It is distant from Moose-Deer Island sixtysix geographic miles. This is the last establishment of the traders in this direction, but the Northwest Company have two to the northward of it on the Mackenzie River. It has been erected for the convenience of the Copper and Dog-Rib Indians, who generally bring such a quantity of reindeer meat, that the residents are enabled, out of their superabundance, to send annually some provisions to the fort at Moose-Deer Island. They also occasionally procure moose and buffalo meat, but these animals are not numerous on this side of the lake. Few furs are collected. *Les poissons inconnus*, trout, pike, carp, and white-fish, are very plentiful, and on these the residents principally subsist. Their great supply of fish is procured in the latter part of September and the beginning of October, but there are a few taken daily in the nets during the winter. The surrounding country consists almost entirely of coarse-grained granite, frequently enclosing large masses of reddish feldspar. These rocks form hills about a mile behind the house, which attain an elevation of three hundred or four hundred feet; their surface is generally naked, but in the valleys between them grow a few spruce, aspen, and birch trees, together with a variety of shrubs and berry-bearing plants.

In the afternoon of the 2d, the party started in high spirits, heartily glad that their course was

to be through a line of country hitherto unexplored. They proceeded northward along the lake, and encamped eight miles from Fort Providence. The eastern shores of the Great Slave Lake are very imperfectly known; none of the traders have visited them, and the Indians give such loose and unsatisfactory accounts, that no estimation can be formed of its extent in that direction. These men say there is a communication from its eastern extremity by a chain of lakes, with a shallow river, which discharges its waters into the sea. This stream they call the Thlouee-tessy, and report it to be navigable for Indian canoes only. The forms of the south and western shores are better known from the survey of Sir Alexander Mackenzie, and in consequence of the canoes having to pass and repass along these borders annually between Moose-Deer Island and Mackenzie's River. Capt. Franklin's observations made the breadth of the lake, between Stony Island and the north main shore, sixty miles less than it is laid down in Arrowsmith's map; and there is also a considerable difference in the longitude of the eastern side of the bay, which he entered.

This lake, owing to its great depth, is seldom completely frozen over before the last week in November, and the ice, which is generally seven feet thick, breaks up about the middle of June, three weeks later than that of the Slave River. The only known outlet to this vast body of water, which receives so many streams on its north and south shores, is the Mackenzie River.

The next morning they proceeded to the mouth of Yellow Knife River, where they found Akaitcho and his hunters encamped. In company with them they paddled up the river, which is an hundred and fifty yards wide, and in an hour came to a cascade, which compelled them to make a portage. Akaitcho caused himself to be paddled by his slave, a young man of the Dog Rib tribe, whom he had taken by force from his friends. When he thought himself out of the reach of observation, however, he laid much of his state aside, and assisted in the labor ; and on better acquaintance, he did not hesitate to be seen paddling, or even carrying his canoe at the portages. Several of the canoes were paddled by squaws, who were very noisy, and frequently quarrelled ; and the weakest was generally clamorous in her lamentations, which were not less when her husband settled the difference by a few blows of his paddle.

On the 4th, they crossed a small lake, and then passed two portages. After this they came to three strong rapids, and immediately after to a part of the river where the rapids were so frequent, that, to avoid them, they carried the canoes into a chain of small lakes, which they entered by a portage of nine hundred yards.

By the 5th of August, all their provision was exhausted excepting some portable soup, and the hunters were sent forward in quest of reindeer. Akaitcho himself was always furnished with a portion of the meals of the officers, as a token of regard which the traders had taught the chiefs to expect.

The nets were set every night, but with little or no success; and the officers were obliged to issue portable soup and arrowroot, food too unsubstantial to support the voyageurs under their exhausting daily labor; and they could not furnish even enough of this to satisfy their desires. At last, on the 9th, the party reached Lower Carp Lake, where Akaitcho said many fishes might be caught; and Captain Franklin resolved to halt for two or three days, to fish, as well as to recruit the men, several of whom were lame. The chief himself went forward to look after the hunters, and promised to make a fire, as a signal, if they had killed any reindeer. All the Indians left them at the same time to hunt.

On the 10th and 11th, the nets caught enough to give the men two hearty meals; and having recovered from their fatigue, they proceeded to Upper Carp Lake, in longitude $113^{\circ} 46'$. The country through which they had been travelling consists mostly of granite, in some spots intermixed with mica slate, often passing into clay slate. Scarcely had the party quitted their encampment, when an Indian met them with the agreeable intelligence that the hunters had made several fires as signals of success in the chase. This inspired the voyageurs with fresh energy, and they quickly paddled through Rein-Deer Lake, on the north side of which they found the hunter's canoes. The Yellow Knife had now dwindled into a brook, and they could not trace it beyond the next lake. Its source is in latitude $64^{\circ} 1'$, and longitude $113^{\circ} 36'$. Its length is

an hundred and fiftysix statute miles. Though this river is sufficiently deep and broad for canoes, it is too much interrupted by falls and rapids ever to become a channel for the conveyance of merchandize.

Akaitcho, who was here with his family, pointed out the distant smoke of the hunters' fires. From the top of a neighbouring hill the prospect was agreeably diversified with hill and valley, and by the appearance of twelve lakes in different directions. On the borders of these lakes a few pine groves occur; but in general, the country is destitute of vegetation, excepting a few shrubs and lichens. The hills are of gneiss, but their acclivities are covered with a coarse gravelly soil.

On the 13th, the voyageurs, who had for some days been murmuring at their meagre diet, broke out into open mutiny; and some of them declared that they would not proceed, unless more food was given them. This conduct was the more blameable, as they were rapidly approaching the fires of the hunters. They merely, however, followed the common practice of their class, who always try how far they can impose on a new master, and are intractable ever after if he yields to them. On this occasion, Capt. Franklin threatened them with the severest punishment, and they again went forward. Just as the party encamped, four of the hunters met them with a load of meat, which completely revived the spirits of the Canadians; and they never again reflected on the officers for bringing them into an inhospitable country, where the means of subsistence could not be procured.

The hunters killed a great many reindeer, and the party no longer suffered from want of food. They crossed many more lakes and portages, and on the 19th reached the lake where Akaitcho proposed that they should pass the winter.

The prospect was not the most agreeable, as the borders of the lake seemed scantily furnished with wood, and that of a kind too small for the purposes of building. The next morning, they paddled to the western extremity, where, on the bank of a small stream, they found that the situation chosen possessed all the advantages they could desire. The trees were numerous and of larger size, some of them two feet in diameter. They determined to erect their dwellings on the summit of the bank, which commands a fine prospect of the surrounding country. The view in front is bounded at the distance of three miles by round-backed hills: to the eastward and westward lie Winter and Round Rock Lakes, which are connected by Winter River, whose banks are well clad with pines, and ornamented with a profusion of mosses, shrubs, and lichens. The united length of the portages they had crossed, since leaving Fort Providence, is twentyone statute miles and a half; and as the men had to traverse each portage four times, with a load of one hundred and eighty pounds, and return three times light, they walked, in the whole, upwards of one hundred and fifty miles. The total length of the voyage from Chippewyan is five hundred and fiftythree miles.

The next morning the voyageurs were divided

into two parties, the one to cut wood for building, and the other to bring in the deer killed by the hunters. To commence their stock of provisions, the carcasses of seven reindeer were brought to the spot that very evening.

The next day Akaitcho (who had been absent on a visit to some of his tribe) arrived with his party, having only obtained fifteen deer. They had heard of the death of the chief's brother-in-law and had spent their time in bewailing the loss, instead of hunting. The decease of this man had also caused another part of the tribe, on whom Capt. Franklin depended for supplies, to remove to Great Bear Lake, out of the line of his proposed route. These circumstances were mortifying; and to increase the evil, Akaitcho now refused to accompany them any farther that season, though he was willing to proceed in the spring. All argument was lost upon him, and he even threatened to leave them and return to Fort Providence. It was therefore resolved to despatch a party to the Coppermine, to examine the route; and with this intention the chief expressed himself well pleased.

On the 28th, Akaitcho came into Capt. Franklin's tent, to make inquiries respecting an eclipse which he had been told was to take place. He was much astonished that the whites should know the exact time at which this event would happen, and remarked that it was a proof of their superiority over the Indians. The Captain took advantage of this occasion to read him a moral lecture, respecting the propriety of fulfilling his engagements; and Akait-

cho promised to do his best for the expedition in return for the interesting communication just made.

On the 29th, Messrs Back and Hood started for the Coppermine. As we shall go over the same ground with the whole party, we shall not follow them on this occasion.

CHAPTER VIII.

Trip to the Coppermine.—Fort Enterprise.—Reindeer.—Departure of Messrs Back and Wentzel.—Conduct of the Indians.—Frozen Fishes.—News from Slave Lake.—Green Stockings.—Temperature.—Diet.—Arrival from Slave Lake.—Esquimaux Interpreters.

ON the morning of the 9th of September, Captain Franklin and Dr Richardson set off, on foot, for the Coppermine River, under the guidance of an old Copper Indian named Keskarrah. They reached the end of their journey on the fourth day, striking the river at an expansion called Point Lake, the latitude of which is $65^{\circ} 9'$, and the longitude $112^{\circ} 57'$. They then walked to the main channel of the river, which they found deep, and between high, rocky banks, with clusters of spruce-trees on their borders. The hills in this neighbourhood are higher than those about the winter-quarters, but stand in the same detached manner, without any connecting ranges; and the bottom of every valley is occupied either by a small lake or a marsh. On the banks of such of these lakes as communicate with the Coppermine there are a few groves of spruce-trees.

After making these observations, the gentlemen returned to the spot from whence they came, and found, on their arrival, that Messrs Hood and Back had also arrived.

The winter house was completed by the 6th of October, and received the name of Fort Enterprise. It was merely a log building, divided into a hall, three bed-rooms, and a kitchen. The walls and roof were plastered with mud, and the floors were of planks rudely hewed with the axe. The same implement served (with the assistance of the crooked knife,) to construct tables, chairs, and bedsteads. The crooked knife serves the Indian and Canadian for plane, chisel, and auger. Snow-shoes and canoe timbers are made with it, as well as bowls and spoons; and with it the deals of dog sledges are reduced to their requisite thinness and polish.

Two men were now appointed to fish, and others were sent for meat as the hunters procured it. This latter employment, though laborious, is liked by the Canadians, as they claim a right to help themselves to the best parts. The reindeer were now in the vicinity of the house, and the success of the hunters was consequently great. Capt. Franklin estimated the numbers he saw, during a short walk, at two thousand. They feed on the lichens, and go in herds of different sizes, from ten to an hundred in each.

On the 18th, Messrs Back and Wentzel set out for Fort Providence, to make the necessary arrangements for transporting the stores expected from

Cumberland, and to endeavour to procure additional supplies from Slave Lake. Ammunition was essential to existence, and tobacco was requisite as well for the comfort of the Canadians, as to preserve the friendship of the Indians.

On the 26th, Akaitcho and his Indians took up their quarters at the house, the hunting having terminated in the neighbourhood, on account of the emigration of the reindeer. The arrival of this party was a serious inconvenience, as the want of ammunition prevented Capt. Franklin from equipping them for hunting, and was obliged to make large issues of provisions to them. Although they are accustomed to subsist themselves for a considerable part of the year by fishing, or snaring the deer, without having recourse to fire-arms, yet, on the present occasion, they felt little inclined to do so, and gave scope to their natural love of ease, as long as the store-house seemed to be well stocked. Nevertheless, as they were conscious of impairing future resources, they did not fail, occasionally, to remind the Captain that it was not their fault, to express an ardent desire to go hunting, and to request a supply of ammunition, although they knew that it was not in his power to give it.

The fishing, having failed as the weather became more severe, was given up on the 5th of November. It had procured about one thousand two hundred *white fish*, from two to three pounds each. There are two other species of *Coregoni* in Winter Lake, *Back's grayling* and the *round fish*; and a few *trout*, *pike*, *methye*, and *red carp*, were also occasionally

obtained from the nets. It may be worthy of notice here, that the fish froze as they were taken out of the nets, in a short time became a solid mass of ice, and by a blow or two of the hatchet were easily split open, when the intestines might be removed in one lump. If in this completely frozen state they were thawed before the fire, they recovered their animation. This was particularly the case with the carp, and it was observed repeatedly, as Dr Richardson occupied himself in examining the structure of the different species of fish, and was always, in the winter, under the necessity of thawing before he could cut them. We have seen a carp recover so far as to leap about with much vigour, after it had been frozen for thirtysix hours.

On the 23d of November, a messenger arrived with letters from Fort Providence, some of which were dated in England the preceding April. The party were not so fortunate with regard to their stores, some of which had been left on the road from York Factory, by the misconduct of the person to whom they were intrusted. They were more fortunate in the arrival of two Esquimaux interpreters at Slave Lake.

There was much trouble this winter in bringing forward the necessary stores, and a report, to the disadvantage of the officers, which was circulated among the Indians by one of the traders at Slave Lake, proved a serious detriment, as it shook the confidence of the savages in their ability to reward them.

Having received one hundred balls from Fort

Providence by the messenger, Capt. Franklin distributed them among the Indians, informing the leader at the same time, that the residence of so large a party as his at the house, amounting, with women and children, to forty persons, was producing a serious reduction in the stock of provisions. He acknowledged the justice of the statement, and promised to remove as soon as his party had prepared snow-shoes and sledges for themselves. Under one pretext or other, however, their departure was delayed until the 10th of the month, when they left the house, having previously received one of the fishing-nets, and all the ammunition at the post. The leader left his aged mother with two female attendants, requesting that if she died during his absence she might be buried at a distance from the fort, that he might not be reminded of his loss when he visited them.

Keskarrah, the guide, also remained, with his wife and daughter, being too old and feeble to hunt. While speaking of this family we may remark that the daughter, called Green Stockings from her dress, is considered to be a beauty by her tribe. Mr Hood drew her portrait, though her mother was averse to her sitting for it. She was afraid, she said, that her daughter's likeness would induce the great chief of England to send for the original. The young lady, however, was not deterred by any such fear. Though under sixteen years of age, she had already been an object of contention between her countrymen, had belonged to two husbands, and

would probably have been the wife of many more, had not her mother required her services as a nurse.

The weather in December was the coldest Capt. Franklin had experienced in America. At one time, the mercury sunk to 57° below zero, and never rose beyond 6° above it; the mean for the month was -29° . During this intense cold the air was generally calm, and the wood-cutters went about their ordinary occupations without any extraordinary precautions, and without feeling any bad effects. They wore shirts of reindeer skin, leathern mittens, and fur caps; but none of them used any defence for the face or needed any.

It may be interesting to the reader to know how the travellers passed their time at this season. A considerable portion of it was occupied in writing their journals. Newspapers and letters from England were read and commented on, again and again. In the evenings the officers joined the men in the hall and took part in their games. Charts were made, drawings taken, and in short so various were their resources that the time was never found to hang heavy.

Their diet was of reindeer flesh, varied twice a week by fish, and occasionally by a little flour, but they had no vegetables whatever. On Sundays they had chocolate, but their greatest luxury was tea (without sugar,) of which they regularly partook twice a day. With reindeer fat and strips of cotton shirts they made candles, and John Hepburn acquired considerable skill in the manufacture of soap, from the wood ashes, salt and fat.

On the 15th of January, seven of their men, who had been with Mr Back, returned, with a supply of rum, powder, tobacco, and clothing. They had been twentyone days on the road from Slave Lake, and their labor was evinced by their sledge collars having worn out the shoulders of their coats. Their loads weighed from sixty to ninety pounds each, exclusive of their bedding and provisions. Such are the ordinary winter employments of the Canadian voyageurs. The spirits, which were proof, were frozen, but after standing some time by the fire, they acquired the consistency of honey. The temperature of the liquid, even in this state was so low as instantly to convert the moisture which condensed on the surface of the dram glass into ice. Yet each of the voyageurs swallowed his dram without inconvenience, or complaining of the toothache.

Captain Franklin was afterwards informed that his carriers had broached the cask on the way, and had spent two days in drinking; which shows how little confidence can be placed in a voyageur, where food or spirits are in question.

On the 27th, Mr Wentzel arrived with the two Esquimaux interpreters, whose names were Augustus and Junius. The former spoke English. On comparing the language of these men with a copy of St John's Gospel, printed for the Moravian missionary settlements on the coast of Labrador, it appeared to be radically and essentially the same. These interpreters belonged to a tribe which resides a little northward of Churchill. They were thorough Esquimaux, having but a very indistinct idea of the Deity.

CHAPTER IX.

Message from the Hook.—Conduct of the Interpreters.—Akaitcho.—April.—Suffering of the Indians.—Sliding down Hill.—Advance of the Season.—A Supply of Food.—May Weather.—Arrival of Water-Fowl.—Akaitcho arrives.—His Conduct.

IN February the temperature was lower than in the preceding month, though not so low as in December, the mean being -25° .

On the 5th of March, the rest of the people arrived from Slave Lake with the remainder of the expected stores. On the 23d, the winter's stock of provisions were expended, and the nets produced but two or three fishes per diem. On the following day, two Indians arrived with a message from the Hook, the chief next in authority to Akaitcho among the Copper Indians. His band was encamped near Great Bear Lake, and he offered to provide a quantity of dried meat on the banks of the Coppermine early in the summer, provided Captain Franklin would furnish him with goods and ammunition. The Captain had none to spare, but told the messengers that he would gladly receive leather or food from the Hook at their meeting, and would pay for them by notes on the Northwest Company's Post at Slave Lake. The Indians assured him that the Hook would look anxiously for his passing.

It now appeared that St Germain, the interpreter, had created a new difficulty. In his intercourse with the Indians he had imbibed fearful

ideas of the danger of the enterprise, which augmented as the time of departure drew nigh. He and Adam, the other linguist, expressed their dislike to the journey in strong terms, to the voyageurs and Indians, who are accustomed to pay much deference to the opinions of an interpreter. For this conduct Capt. Franklin called St Germain to account, threatening to send him to England for trial, if the expedition should be stopped through his fault. After this menace, he was more circumspect in his behaviour.

On the 29th, Akaitcho arrived at the house, and was the next morning summoned to a conference which commenced by showing him the maps and charts, and explaining future intentions. He was greatly pleased with this mark of respect, and began his speech by saying, 'that, though a great number of idle reports had been flying about the barren grounds,' he was convinced that the officers had told him nothing but the truth. He promised that his people should accompany the expedition to the mouth of the Coppermine with as little delay as possible; and if they did not meet with Esquimaux there, that they should proceed still farther along the coast. He was anxious, he said, to have a friendly interview with the Esquimaux, and he farther requested that if any of the party should meet the Dog Ribs, they would endeavour to persuade them to live on friendly terms with his tribe.

The commencement of April was fine, and for several days a considerable thaw took place in the heat of the sun, which, laying bare some of the lich-

ens on the sides of the hills, produced a consequent movement of the reindeer to the northward, and induced the Indians to believe that the spring was already commencing. Many of them, therefore, quit-
ted the woods, and set their snares on the barren grounds near Fort Enterprise. Two or three days of cold weather, however, toward the middle of the month, damped their hopes, and they began to say that another moon must elapse before the arrival of the wished-for season. In the mean time, their premature departure from the woods caused them to suffer from want of food, and the whites were in some degree involved in their distress. No supplies were received from the hunters, the nets produced but very few fish, and the pounded meat, which it was intended to keep for summer use; was nearly expended.

The Indian families about the house, consisting principally of women and children, suffered most. Capt. Franklin had often requested them to move to Akaitcho's lodge, where they were more certain of receiving supplies; but as most of them were sick or infirm, they did not like to quit the house, where they daily received medicines from Dr Richardson, to encounter the fatigue of following the movements of a hunting camp. They cleared away the snow on the site of the autumn encampments, to look for bones, deer's feet, bits of hide, and other offal. When the officers beheld them gnawing the pieces of hide, and pounding the bones for the purpose of extracting some nourishment from them by boiling, they regretted their inability to relieve

them, but little thought that they should themselves be afterwards driven to the necessity of eagerly collecting these same bones a second time from the dunghill.

At this time, to divert the attention of the men from their wants, they were encouraged in the practice of sliding down the steep bank of the river upon sledges. These vehicles descended the snowy bank with much velocity, and ran a great distance upon the ice. The officers joined in the sport, and the numerous overturns they experienced formed no small share of the amusement of the party; but on one occasion, when Capt. Franklin had been thrown from his seat and almost buried in the snow, a fat Indian woman drove her sledge over him, and sprained his knee severely.

On the 21st, the ice in the river was measured and found to be five feet thick, and in setting the nets in Round Rock Lake, it was there ascertained to be six feet and a half thick, the water being six fathoms deep. The stomachs of some fish were at this time opened by Dr Richardson, and found filled with insects, which appear to exist in abundance under the ice during the winter.

On the 22d, a moose-deer was killed at the distance of fortyfive miles; St Germain went for it with a dog-sledge, and returned with unusual expedition on the morning of the third day. This supply was soon exhausted, and the party passed the 27th without eating, with the prospect of fasting a day or two longer, when old Keskarrah entered with the unexpected intelligence of having killed a

deer. It was divided between the whites and the Indians, and during the night a seasonable supply arrived from Akaitcho. Augustus returned with the men who brought it, much pleased with the attention he had received from the Indians during a visit to Akaitcho.

The weather in the beginning of May was fine and warm. On the 2d, some patches of sandy ground near the house were cleared of snow. On the 7th, the sides of the hills began to appear bare; and on the 8th, a large house-fly was seen. This interesting event spread cheerfulness through the residence, and formed a topic of conversation for the rest of the day.

On the 9th, the approach of spring was still more agreeably confirmed by the appearance of a merganser and two gulls, and some loons, or arctic divers, at the rapid. This day, to lessen the labor of dragging meat to the house, the women and children and all the men, except four, were sent to live at the Indian tents.

The blue-berries, crow-berries, eye-berries, and cran-berries, which had been covered, and protected by the snow during the winter, might at this time be gathered in abundance, and proved indeed a valuable resource. The ground continued frozen, but the heat of the sun had a visible effect on vegetation; the sap thawed in the pine-trees, the mosses were beginning to shoot, and the calyptræ of some of the *jungermanniæ* were already visible.

A robin appeared on the 14th. This bird is hailed by the natives as the infallible precursor of warm

weather. Ducks and geese were also seen in numbers, and the reindeer advanced to the northward. The merganser, which preys upon small fish, was the first of the duck tribe that appeared; next came the teal, which lives upon small insects that abound in the waters at this season; and lastly the goose, which feeds upon berries and herbage. Geese usually appear at Cumberland House, in latitude 54° , about the 12th of April; at Fort Chipewyan, in latitude 59° , on the 25th of April; at Slave Lake, in latitude 61° , on the 1st of May; and at Fort Enterprise, in latitude $64^{\circ} 28'$, on the 12th or 14th of the same month.

On the 21st, Akaitcho arrived at Fort Enterprise and was saluted by a discharge of small-arms. He led the way, preceded by his standard-bearer, and advanced with a slow and stately step to the door, where Mr Wentzel and Capt. Franklin received him. The faces of the party were daubed with vermilion, the old men having a spot on the right cheek, the young ones on the left. Akaitcho himself was not painted. On entering he sat down on a chest; the rest placed themselves in a circle on the floor. The pipe was passed once or twice round, and in the mean time a bowl of spirits and water, and a considerable present of cloth, blankets, capots, shirts, &c. was placed on the floor for the chief's acceptance, and distribution amongst his people. Akaitcho then commenced his speech, but we regret to say, that it was very discouraging, and indicated that he had parted with his good humor, at least since his March visit. He first in-

quired, whether, in the event of a passage by sea being discovered, the party would come to his lands in any ship that might be sent. Being answered that it was probable, but not quite certain, that some one among them might come, he expressed a hope that some suitable present would be forwarded to himself and nation: 'for,' said he, 'the great chief who commands where all the goods come from, must see from the drawings and descriptions of us and our country that we are a miserable people.' Capt. Franklin assured him that he should be remembered, provided he faithfully fulfilled his engagement.

He next complained of the non-payment of the Captain's notes by Mr Weeks, the trader at Slave Lake, from which he apprehended that his own reward would be withheld. 'If,' said he, 'your notes to such a trifling amount are not accepted while you are within such a short distance, and can hold communication with the fort, it is not probable that the large reward, which has been promised to myself and party, will be paid when you are far distant, on your way to your own country. It really appears to me,' he continued, 'as if both the Companies consider your party as a third company, hostile to their interests, and that neither of them will pay the notes you give to the Indians.'

Afterwards, in the course of a long conference, he enumerated many other grounds of dissatisfaction; the principal of which were, want of attention to him, as chief, the weakness of the rum formerly sent to him, the smallness of the present now of-

ferred, and the want of the chief's clothing, which he had been accustomed to receive at Fort Providence every spring. He concluded by refusing to receive the goods now laid before him.

We will now refer our readers to the next chapter for the result of these proceedings.

CHAPTER X.

Captain Franklin's Reply to Akaitcho.—The Copper Indians.—Keskarrab.—Marriages.—Wars.—Numbers.—The Dog-Ribs.—Their Character.—Residence and Numbers.—The Hare Indians.—The Quarrellers.—Other Tribes.—Behaviour of Akaitcho.—The first Party leaves Fort Enterprise.

IN reply to the complaints of Akaitcho, Captain Franklin said that no dependence should be placed on vague reports. He had heard a great many to the disadvantage of Akaitcho, but, had given them no credit. Moreover, the rum which had been sent to him was such as was drank by the great men in England, milder in taste, but stronger in reality than that which he had been accustomed to receive. The party had not been able to bring large quantities of goods like the traders; but in consideration of his not receiving the usual spring outfit, his debts to the company had been cancelled, and a present much larger than he had ever before received was to be got ready for him on his return. The Captain farther said, that he was much disappointed in not receiving the dried meat he had promised, and that, in fact, his complaints were so groundless, in com-

parison with the injury resulting to the expedition from his breach of promise, that he believed they were preferred to cloak his own want of good faith.

Akaitcho then shifted his ground, advising that the enterprise should be abandoned, on the score of danger, and at last showed some disposition toward a reconciliation. St Germain exerted himself much to effect a change in the savages, and in some degree succeeded. Before we proceed farther in our narrative, it may not be amiss to give some account of these Copper Indians.

They are called by the Chippewyans *Tantsawhot-dinne*, or Birch-rind people. They were originally, according to their own account, Chippewyans, and lived on the south side of Slave Lake. Their language, traditions, and customs are essentially the same as those of the Chippewyans, but in personal character they have greatly the advantage of that people, owing probably to local causes, or perhaps to their procuring their food more easily and in greater abundance. They hold women in the same low estimation as the Chippewyans do, looking upon them as a kind of property which the stronger may take from the weaker whenever there is just reason for quarrelling, if the parties are of their own nation, or whenever they meet, if the weaker party are Dog-Ribs or other strangers. They suffer, however, the kinder affections to show themselves occasionally: they in general live happy with their wives: the women are contented with their lot. Our travellers witnessed several instances of strong attachment.

Of their religion, or ideas of a future state, we have no accounts, as they are averse to speak of their opinions, for fear of ridicule. Akaitcho always evaded questions on this subject, but evinced a strong desire to learn.

This chief, and many of his tribe, possessed a strong curiosity. Capt. Franklin thought that a Christian mission might produce a happy effect in this quarter. The old guide Keskarrah alone used boldly to express his disbelief of the existence of a supreme being, and to give his reasons, the principal of which was, that though an old man he had never seen God himself. This aged sceptic was a little conceited, as appears from the following exordium to one of his speeches:—‘It is very strange that I never meet with any one as wise as myself.’

Few of this nation have more than one wife at a time, and none but the chiefs have more than two. The same man frequently marries sisters; and cousins intermarry; but no union takes place between uncle and niece.

The last war excursion they made against the Esquimaux was about eighteen years ago, when they destroyed thirty persons at the mouth of what they term Stoney Point River, near the mouth of the Coppermine. Formerly, when they were destitute of fire-arms, they were oppressed by the Chippewyans; but since they have received weapons from the traders, the Chippewyans do not care to venture on their lands, and all of that nation who live about Slave Lake hold the name of Akaitcho in great respect.

The number of Copper Indians may be one hundred and ninety, viz. eighty males, and the rest women and young children. At the time of our story there were fortyfive hunters in the tribe. The adherents of Akaitcho are forty men and boys, the rest follow other chiefs.

The *Thlingcha-dinneh*, or Dog-Ribs, or, as they are sometimes termed by the Crees, who formerly warred against them, *Slaves*, inhabit the country to the westward of the Copper Indians, as far as the Mackenzie's River. They are of a mild, hospitable, but rather indolent disposition; spend much of their time in amusements, and are fond of singing and dancing. In this respect, and in another, they differ very widely from most of the other aborigines of North America. We allude to their kind treatment of the women. The men do the laborious work, while their wives employ themselves in ornamenting their dresses with quill-work, and in other occupations suited to their sex. Kind treatment of the fair sex being usually considered as an indication of considerable progress in civilization, it might be worth while to inquire how it happens, that this tribe has stept so far beyond its neighbours. It has had, undoubtedly, the same common origin with the Chippewyans; for their languages differ only in accent, and their mode of life is essentially the same. We have not sufficient data to prosecute the inquiry with any hope of success; but we may recall to the reader's memory, that the Dog-Ribs say they came from the westward, whilst the Chippewyans say that they migrated from the eastward.

The chief tribe of the Dog-rib nation, termed Horn Mountain Indians, inhabit the country between Great Bear Lake and the west end of Great Slave Lake. They muster about two hundred men and boys capable of pursuing the chase. Small detachments of the nation frequent Marten Lake, and hunt during the summer in the neighbourhood of Fort Enterprise. Indeed this part of the country was formerly exclusively theirs, and most of the lakes and remarkable hills bear the names which they imposed upon them. As the Copper Indians generally pillage them of their women and furs when they meet, they endeavour to avoid them, and visit their ancient quarters on the barren grounds only by stealth.

Immediately to the northward of the Dog-Ribs, on the north side of Bear Lake River, are the *Kawcho-dinneh*, or Hare Indians, who also speak a dialect of the Chippewyan language, have much the same manners with the Dog-Ribs, and are considered both by them and by the Copper Indians to be great conjurers. These people report, that in their hunting excursions to the northward of Great Bear Lake, they meet small parties of Esquimaux.

Immediately to the northward of the Hare Indians, on both banks of Mackenzie's River, are the *Tykothee-dinneh*, Loucheux, Squint-Eyes, or Quarrellers. They speak a language distinct from the Chippewyan. They war often with the Esquimaux at the mouth of Mackenzie's River, but have occasionally some peaceable intercourse with them, and

it would appear that they find no difficulty in understanding each other, there being considerable similarity in their languages. Their dress also resembles the Esquimaux, and differs from that of the other inhabitants of Mackenzie's River. The Tykothee-dinne trade with Fort Good-Hope, situated a considerable distance below the confluence of Bear Lake River with the Mackenzie's River, and within three days march of the Arctic Sea. It is the most northern establishment of the Northwest Company, and some small pieces of Russian copper coin once made their way thither across the continent from the westward. Blue or white beads are almost the only articles of European manufacture coveted by the Loucheux. They perforate the septum of the nose, and insert in the opening three small shells, which they procure at a high price from the Esquimaux.

On the west bank of Mackenzie's River there are several tribes who speak dialects of the Chipewyan language, that have not hitherto been mentioned. The first met with, on tracing the river to the southward from Fort Good-Hope, are the *Ambawtawhoot-dinne*, or Sheep Indians. They inhabit the Rocky Mountains near the sources of the Dawhoot-dinne River, which flows into Mackenzie's, and are but little known to the traders. Some of them have visited Fort Good-Hope. A report of their being cannibals may have originated in an imperfect knowledge of them.

Some distance to the southward of this people are the Rocky Mountain Indians, a small tribe which

musters about forty men and boys capable of pursuing the chase. They differ but little from the next we are about to mention, the *Edchawtahoot-dinneh*, Strong-Bow, Beaver, or Thick-Wood Indians, who frequent the *Riviere aux Liards*, or south branch of Mackenzie's River. The Strong-Bows resemble the Dog-Ribs somewhat in their disposition; but when they meet, they assume a considerable degree of superiority over the latter, who meekly submit to the haughtiness of their neighbours. Until the year 1813, when a small party of them, from some unfortunate provocation, destroyed Fort Nelson, on the *Riviere aux Liards*, and murdered its inmates, the Strong-Bows were considered to be a friendly and quiet tribe, and esteemed as excellent hunters. They take their names, in the first instance, from their dogs. A young man is the father of a certain dog; but when he is married and has a son, he styles himself the father of the boy. The women have a habit of reproving the dogs very tenderly, when they observe them fighting.—‘Are you not ashamed,’ say they, ‘are you not ashamed to quarrel with your little brother?’ The dogs appear to understand the reproof, and sneak off.

The number of men and boys of the Strong-Bow nation who are capable of hunting may amount to seventy.

There are some other tribes who also speak dialects of the Chippewyan, upon the upper branches of the *Riviere aux Liards*, such as the *Nohhannies* and the *Tsillawdahoot-dinneh*, or Brush-wood In-

dians. They are but little known, but the latter are supposed occasionally to visit some of the establishments on Peace River.

Having now briefly communicated the principal facts relative to the Indians in this quarter, we return to the proceedings of Captain Franklin and his party.

Akaitcho was still unwilling to proceed, and complained that the immediate supply of goods was inadequate to fulfil his expectations, and after much importunity declared that he would not except what was offered. His people, however, declared their willingness to go on, and he was compelled to submit.

The first party started from Fort Enterprise on the 4th of June, under Doctor Richardson. It consisted of fifteen voyageurs, four Indians, and some squaws. They had with them three dog sledges, and each of the men carried a burthen of eighty pounds, exclusive of personal baggage. Akaitcho and his people departed on the same day, with instructions to proceed to Point Lake, and collect provisions.

CHAPTER XI.

Captain Franklin leaves Fort Enterprise.---Sufferings of the Men.---The Coppermine.---Musk Oxen killed.---The Hook.---Portage to Great Bear Lake.---Rapids.---The Copper Mountains.---The Interpreters converse with the Esquimaux.---Flight of the Esquimaux.---The Esquimaux seen again.---An old Savage.

ON the 13th, the men returned to Fort Enterprise, having left Dr Richardson at Point Lake, where the ice had not yet begun to decay. On the morning of the 14th, Capt. Franklin started with the canoes and the remainder of the stores. Being heavily laden, they only made five miles this day.

Marten Lake, through which the route lay is extensive, with large arms, which branch out in different directions. After passing this, the party came, on the 20th, to the ridge which separates the streams which flow into Winter Lake from those which run northward. Near the base of this ridge they crossed a small, rapid stream, in which there is a cascade fifty feet high. The next day they reached Point Lake, where the ice was still six or seven feet thick. Here they remained till the 25th, to procure provisions for the journey.

They then started, dragging the canoes and baggage over the ice, but, owing to the depth of the snow, made but small progress. The next day was extremely hot, and the men were soon jaded; indeed most of them were already lame. Their sufferings at this early stage of the journey induced Captain Franklin to leave one of the canoes be-

hind. Even with this relief their task was not easy. The surface of the ice, being honey-combed by recent rains, presented innumerable sharp points, which tore their mocasins, and lacerated their feet; and the poor dogs marked their tracks with their blood.

In the evening of the 28th, the party reached a rapid by which Point Lake communicates with Red Rock Lake, and were surprised at finding the Coppermine an inconsiderable stream. The next day they passed Red Rock Lake, and entered another called Rock Nest Lake, from a remarkable Rock on its shore. They crossed it on the ice, and on the 1st of July embarked on the Coppermine River, which is here two hundred yards wide and ten feet deep, and flows rapidly over a rocky bottom. The scenery of its banks is fine; they are well clad with wood, and the surfaces of the rocks are richly ornamented with lichens. The same kind of country prevails in the same parallel as far west as Mackenzie's River; but the land eastward is entirely barren.

They proceeded down the river, sometimes through strong rapids, shooting over great stones, where a single false stroke of a paddle would have been destructive. In some places the channel was blocked up by drift ice, and they were obliged to cut a passage for the canoes, or drag them over. As they proceeded, the river became wider, always running between hills of moderate elevation. On the 4th, the hunters killed eight musk oxen. Capt. Franklin himself wounded one of these animals,

which instantly attacked him, but was frightened away by the arrival of some of the people.

On the evening of the sixth, the party encamped at the base of a range of mountains from twelve to fifteen hundred feet high. Near this place the chief called the Hook was encamped, who, without solicitation, gave up to Captain Franklin all the meat he had collected, expressing his regret that he had no more to bestow. In return for these provisions he accepted an order on the Northwest Company, to be paid at Fort Providence.

On the same day, after passing the mountain range, the party arrived at the portage leading to Great Bear Lake, at the westernmost point on the Coppermine, where the river resumes a northern course and forces a passage through the mountains. From hence to Bear Lake the distance is about forty miles.

Beyond this spot the river diminishes in breadth, and a succession of rapids is formed. It still runs between high ranges of mountains, though its actual boundaries are banks of mud mixed with clay, which are clothed with dwarf pines.

The day after leaving the portage, the party came to a place where the river is contracted between lofty banks to the width of an hundred and twenty yards. Just beyond this, it descends three quarters of a mile through a deep narrow and crooked channel, cut through the foot of a hill five or six hundred feet high. It is confined between perpendicular cliffs like walls, and rushing furiously through the chasm, discharges itself at the northern extrem-

ity in a sheet of foam. After being lightened, the canoes ran through this defile without injury.

On the 11th, the party reached the Copper Mountains, from which the river derives its name. Pieces of native copper are found in all parts of this range, of which the aborigines were accustomed to make knives, hatchets, and other utensils, before the traders came among them. The original repository of the metal has never been discovered.

As they were now coming to the Esquimaux country, the guides recommended caution in lighting fires, and that none should show themselves on the tops of hills. Throughout the 12th, they found the current very rapid, the stream being contracted between perpendicular walls of rock, to which large masses of ice still adhered, though the earth around was rich with vegetation. At night they encamped within twelve miles of a rapid, where the Indians said the Esquimaux were invariably found; and to confirm the statement, traces of these people were seen near the spot. That there might be as little delay as possible in opening a communication with the Esquimaux, Augustus and Junius were sent forward, clad in their national costume, and furnished with presents wherewith to conciliate their countrymen.

The Indians in the mean while were not suffered to move out of sight, lest they should be seen, and cause an alarm. The next day passed, and the interpreters had not returned, and Capt. Franklin determined to go on, but he found much difficulty

in persuading Akaitcho and his people to stay behind. They yielded, however, on condition that Mr Wentzel would remain with them.

The river here flows between cliffs of loose sand mixed with gravel and red sand-stone rocks, and is everywhere shallow and rapid. Most of the officers and half of the men marched ahead, to lighten the canoes, and to reconnoitre. In the evening they met Junius, who informed them that he had seen four Esquimaux tents, and that he had had some conversation with their inmates across the river. The news of the arrival of the party had frightened the Esquimaux, and they would not come across. As he and Augustus had expended all their provision, he had come back for more, leaving his comrade to effect a more perfect communication.

After resting, Junius set off again, and on the afternoon of the next day the Indians joined the party, Mr Wentzel having been unable to keep them back. By threats and promises they were at last persuaded to keep out of sight till the Esquimaux should be prepared to receive them.

The next day, the party proceeded, and passed the rapid below which the Esquimaux were encamped, in which the canoes narrowly escaped being wrecked. Here large, irregular sand-hills inclose both banks. The country around them consists of high, round hills.

Just as Augustus was conversing with one of the Esquimaux, who had paddled half way across the river for the purpose, some of the men on shore showed themselves on the hill tops. This unfortu-

nate circumstance revived the fears of the Esquimaux, and they instantly fled, leaving their dogs and other property. In this party there were four men, and as many women. Augustus and Junius were sent to look for them, but their search was fruitless. They put a few pieces of iron and trinkets in their canoes, which were lying on the beach. Some men were also sent to secure the stages of fish, and protect them as much as possible from the attacks of the dogs. Under the covering of their tents were observed some stone kettles and hatchets, a few fish-spears made of copper, two small bits of iron, a quantity of skins, and some dried salmon, which was covered with maggots, and half putrid. The entrails of the fish were spread out to dry. A great many skins of small birds were hung up to a stage, and even two mice were preserved in the same way. Thus it would appear that the necessities of these poor people induce them to preserve every article that can be possibly used as food. Several human skulls which bore the marks of violence, and many bones, were strewn about the ground near the encampment, and as the spot exactly answers the description given by Mr Hearne, of the place where the Chipewyans who accompanied him perpetrated the dreadful massacre on the Esquimaux, there is no doubt of this being the place. Its situation is in latitude $67^{\circ} 42'$, and longitude $115^{\circ} 49'$. The rapid is a shelving cascade, three hundred yards in length, with a descent of fifteen feet. From a hill close by there is a distinct view of the polar sea, which

is here full of islands, and at this time was choked with ice.

The officers were preparing to go down to the sea in one of the canoes, when Adam the interpreter returned with the news that the Esquimaux were pursuing a party who had been sent to collect wood. Going to their rescue, they were met returning at a slow pace. They had come unawares upon the Esquimaux party, which consisted of six men, with their women and children, who were travelling toward the rapid with a considerable number of dogs carrying their baggage. The women hid themselves on the first alarm, but the men advanced, and stopping at some distance from the whites, began to dance in a circle, tossing up their hands in the air, and accompanying their motions with much shouting, to signify their desire of peace. The men saluted them by pulling off their hats, and making bows, but neither party was willing to approach the other; and at length the Esquimaux retired to the hill, from whence they had descended when first seen. The whites proceeded, in the hope of gaining an interview with them; but lest their appearance in a body should alarm them, advanced in a long line, at the head of which was Augustus. They were led to the baggage, which they had deserted, by the howling of the dogs; and on the summit of the hill found an old man, who was too infirm to effect his escape with the rest. He was much terrified when Augustus advanced, and probably expected immediate death; but that the fatal blow might not be unrevenged, he seized his spear,

and made a thrust with it at his supposed enemy. Augustus, however, easily repressed the feeble effort, and soon calmed his fears by presenting him with some pieces of iron, and assuring him of his friendly intentions. Dr Richardson and Captain Franklin then joined them, and after receiving their presents, the old man was quite composed, and became communicative. His dialect differed from that used by Augustus, but they understood each other tolerably well.

CHAPTER XII.

Terregannuck and his People.---More Esquimaux.---The Copper Indians turn back.---The Party proceed along the Coast, and finally turn back.---Hood's River.---Journey across the Barren Grounds.---Sufferings of the Party.---Tripe de Roche.---The River Anatessey.

It appeared that the party to which the old Esquimau belonged consisted of eight men and their families, who were returning from a hunting excursion with dried meat. The old gentleman said his name was Terregannuck, or the White Fox, and that his tribe called themselves Nag-ge-ook-tor-meoot, or Deer Horn Esquimaux. They frequent the mouth of the Coppermine for the purpose of salting salmon, and then retire to the westward, where they pass the winter in snow houses. In reply to inquiries made by the travellers, he said that the reindeer abound on the coast in summer, and that musk oxen were to be found at a little

distance up the rivers. He said there was plenty of drift-wood along the shore, but he had no knowledge of the coast eastward.

When he had answered all questions, Terregannuck proposed going to his baggage, and it was then first seen that he could not walk without sticks. On reaching his store, he distributed pieces of dried meat to his new acquaintances, who ate them, though much tainted, in token of peaceable intentions. Capt. Franklin then told him that he was accompanied by several Copper Indians, who were desirous to make peace with his people, and he replied that he would be rejoiced to see the hostility between the tribes terminated, and would gladly welcome the Indians.

The countenance of Terregannuck was oval, with a sufficiently prominent nose, and had nothing very different from an European face, except in the smallness of his eyes, and, perhaps, in the narrowness of his forehead. His complexion was very fresh and red, and he had a longer beard than Capt. Franklin had seen on any of the aboriginal inhabitants of America. It was between two and three inches long, and perfectly white. His face was not tattooed. His dress consisted of a shirt or jacket with a hood, wide breeches, reaching only to the knee, and tight leggins sewed to the shoes, all of deerskin. The soles of the shoes were made of sealskin, and stuffed with feathers instead of socks. He was bent with age, but appeared to be about five feet ten inches high. His hands and feet were small in proportion to his height. When-

ever Terregannuck received a present, he placed each article first on his right shoulder, then on his left; and when he wished to express still higher satisfaction, he rubbed it over his head. He held hatchets, and other iron instruments, in the highest esteem. On seeing his countenance in a glass for the first time, he exclaimed, 'I shall never kill deer more,' and immediately put the mirror down. The tribe to which he belongs repair to the sea in spring, and kill seals: as the season advances they hunt deer and musk oxen at some distance from the coast. In all essentials they are like the Esquimaux described in other parts of this volume, excepting stature. They are much larger than those seen by Capt. Parry, and five feet ten inches is not an uncommon height among them.

Akaitcho and his followers, on their way to rejoin Capt. Franklin, saw the Esquimaux, and endeavoured to open a communication with them, but without success.

In the afternoon of the 17th, a party of nine Esquimaux appeared, carrying their canoes and baggage; but when they perceived the tents, they turned and fled. The appearance of so many different bands terrified the Copper Indians so much that they resolved to return to their own hunting-grounds, and Capt. Franklin had difficulty even to persuade them to wait for Mr Wentzel at the Copper Mountains. St Germain and Adam, the two interpreters, also desired to be discharged; but as they were the only two good hunters in the party, the Captain would by no means consent.

At the departure of the Indians, Capt. Franklin reminded them of the necessity of making a deposit of provisions at Fort Enterprise, and they promised to attend to it. It was afterwards found that their fears did not even permit them to wait for Mr Wentzel, as they had engaged to do.

Captain Franklin and his party then descended to the sea, and began their journey eastward along the coast, having travelled three hundred and thirtyfour miles this season, the distance from Fort Enterprise to the mouth of the Coppermine. The latter point is in latitude $67^{\circ} 47' 50''$, and longitude $115^{\circ} 36' 49''$.

It would be tedious to follow our friends along the shore of the Hyperborean Sea. At almost every point where they landed, they found traces of the Esquimaux, and deposits which they had left behind them. They saw many islands, bays, and capes, of which all that can be said is, that their positions are determined, and they are laid down on the map. They found drift-wood on the shore in abundance, and it may be remarked here that the Coppermine brings none down; neither does any other stream excepting Mackenzie's River, from which the existence of an easterly current may be inferred. In some places the coast presented a beach of gravel, skirted by green plains, but as they proceeded eastward it became rocky and sterile. Sometimes the expedition was detained by drift ice and bad weather and at last, on the 19th of August, the stock of provisions being expended, and all hope of meeting the Esquimaux

being at an end, Capt. Franklin resolved to return. Point Turnagain, the farthest point eastward to which the party penetrated, is six degrees and a half east of the mouth of the Coppermine, or, by following the windings of the coast, a distance of five hundred and fiftyfive geographic miles.

Now commences the relation of the most affecting and tragical events recorded in the annals of travels. The original plan of Capt. Franklin had been to return by the mouth of the Coppermine River; but the length of the journey and the want of provisions induced him to change his determination, and he resolved to proceed up Hood's River, a little west of Point Turnagain, as far as it might be found navigable, and then strike across the barren grounds to Fort Enterprise.

On the 22d of August, the party turned back, and in three days reached Hood's River, which they ascended to the first rapid, and encamped. Here ended their journey on the Arctic Sea. The next morning they proceeded up the river, which is full of shoals and from one hundred to an hundred and twenty yards wide. The distance made this day was only six miles, and on the next, after dragging the canoes up shoals and contending with rapids, the journey in a direct line was only seven miles. They then came to two beautiful falls, above which the river appeared so shallow, that it was deemed useless to proceed farther in canoes. The Captain therefore determined to construct two small canoes out of the materials of the larger ones, and the operation was finished by the last day of the month.

The leather which had been preserved for making moccasins was now divided among the men, and such articles of warm clothing as were most necessary were issued to each. This done, Capt. Franklin informed them of his determination to proceed directly to Point Lake, thence distant an hundred and fifty miles in a straight line. The luggage consisted of nets, hatchets, astronomical instruments, clothing, blankets, three kettles, and the two canoes, which were each carried by one man. The burthen of each might amount to ninety pounds; and thus laden they set forward in the afternoon of the 31st, at the rate of about a mile an hour, including rests. In the evening, the hunters killed a musk cow, but the men were too heavily laden to carry more than a small portion of the flesh. They encamped, and about midnight their tent was blown down, and they were all completely drenched.

On the morning of the 1st of September, there was a fall of snow, and the canoes became a cause of delay, from the difficulty of carrying them in a high wind, and they sustained much injury from the falls of those who had the charge of them. The face of the country was broken by small hills, and the ground was plentifully strewed with small stones, very painful to men carrying heavy burthens. This day a deer and a musk ox were killed; and at night they kindled a fire of moss, to cook a part of the flesh, as there was no wood at hand.

On the 3d, emerging from the valley of Hood's River, they entered a level but very barren country, varied only by ponds and marshes, and covered

with small stones. This day they made ten miles and three quarters. On the 4th, the men, being weakened by hunger, began to find their burthens very oppressive, but did not complain. A heavy rain which changed to snow detained them during the 5th, and they remained in their beds all day ; but their blankets were insufficient to secure them from the severity of the frost. The next day there was no abatement of the storm ; the tents were completely frozen, and the snow had drifted round them three feet deep, and even inside there was a covering of several inches on their blankets. Hunger was, however, their greatest suffering.

On the 7th, the weather cleared, but was very cold, and the wind was strong. The party proceeded, though weak from fasting, and though their garments, bed-clothes, &c. were stiff with frost. The ground was covered a foot deep with snow, the margins of the lakes were incrustated with ice, and the swamps over which they had to pass were not entirely frozen, so that they frequently plunged knee deep in water. Those who carried the canoes were frequently blown down, and by this means the largest was so broken as to be wholly ruined. As the accident could not be repaired, they turned it to the best account, by making a fire of the broken materials, and cooked a little portable soup and arrow-root, the only provision left. This was a scanty repast after three days fasting, but it enabled them to proceed at a quicker pace than before. In the afternoon, they came to a more hilly country, abounding in large stones, which were covered with lichens

of the genus *gyrophora*, called by the Canadians *tripe de roche*. A considerable quantity was gathered, which, with half a partridge each, furnished a slender supper; after which our friends passed a comfortless night in their damp clothes.

The next morning they came to a stream flowing westward with a rapid current, which they had much difficulty in crossing, as their canoe wanted gumming, which they were unable to perform for want of wood. However, they crossed the stream by means of a range of rocks, though several slipped into the current, and were drenched completely; indeed they would have perished, but for the aid of the others. The march was continued till a late hour, in the hope of overtaking the hunters, who had gone before; and their supper, and only meal for that day, consisted of a partridge each, and some *tripe de roche*.

In the morning of the 9th, they overtook the hunters, who were resting on the borders of a lake which stretched to the westward as far as they could see, and discharged its waters by a rapid stream an hundred and fifty yards wide. Being entirely ignorant where they might be led by following the shore of the lake, they resolved to cross the river, if possible, and some willows which grew at hand enabled them to gum their canoe. In the afternoon, St Germain and Adam ferried the party over, one at a time, causing each to lie flat in its bottom,—by no means a pleasant posture, on account of its leakiness. This done, the party walked two miles farther, encamped, and supped on

two hares only, as there was no tripe de roche at this place. From the top of a hill, Capt. Franklin still saw the lake stretching westward, and subsequently learned that the river was the Anatessy.

CHAPTER XIII.

A Musk-Ox killed.---The Party come to a Lake and cross a River.---Danger of Belanger.---They reach Point Lake.---The Canoe left.---They arrive at the Coppermine.---Adventure of Dr Richardson.---Efforts to cross.---Fate of Cr dit and Vaillant.---Dr Richardson stops.---Dreadful Sufferings of the Party.

THE day after crossing the Anatessy, our friends were so fortunate as to kill a musk-ox. So great was their hunger that they did not wait to cook the flesh, but devoured the intestines raw on the spot, which were pronounced excellent by the most delicate among them. This was the first sufficient meal they had eaten for six days.

Here they were detained a whole day by a violent gale. They started again on the 12th, and in the morning of the 13th, had the mortification to find themselves on the borders of a large lake, which, as they could not cross, they coasted to the westward. The flesh of the musk-ox was now exhausted, and to add to their distress the tripe de roche had become extremely nauseous to the whole party, and had produced severe bowel complaints. This evening the officers were grieved to find that their improvident followers had thrown

away the fishing-nets, their only resource in case they should kill no animals, to lighten their loads.

In the morning of the 14th, they came to a river which discharged the waters of the lake, and here one of the hunters killed two deer, on which the party once more made a good meal. After this, they proceeded to cross the river just above a rapid. St Germain, Belanger, and Captain Franklin embarked first, but upset the canoe in the middle of the rapid. Fortunately, they kept hold of it till they got footing on a rock, where the water was no higher than their waists, where they emptied the canoe. Belanger then held it steady while the Captain and St Germain embarked, but he could not get in himself, as the canoe would have been hurried down the rapid the moment he lifted his foot from the rock. Scarcely had the conveyance left him, when it struck another rock, and went down; but as the place was shallow, the Captain and St Germain again emptied it and reached the shore. In the mean while, Belanger was suffering extremely, immersed in water almost freezing, and the upper part of his body covered with wet clothes, in a temperature little above zero, aggravated by a strong breeze. Several attempts were made to reach him with the canoe, but they all proved ineffectual. At last, when almost exhausted, the canoe reached him with the end of a cord, and he was dragged, entirely senseless, through the rapid.

The rest of the party were carried over on the 15th, and they proceeded along the lake, which was ascertained to be the Contwayto, or Rum Lake.

Taking leave of this, they continued onward, sick and starving, till the twentysecond, when they reached a branch of Point Lake. Our readers will perhaps be desirous to know how they passed their nights without fire, in such weather. The first operation after encamping was to thaw their frozen mocasins, if a sufficient fire could be made ; and dry ones were put on. They then laid down and conversed till their blankets were thawed by the heat of their bodies, and they had gathered sufficient warmth to sleep. On many nights they had not the good fortune to sleep in dry clothes ; for when they could not make fire to dry them, they durst not put them off, lest they should freeze so hard as to be unfit to wear in the morning, and therefore inconvenient to carry.

Following the shores of Point Lake on the 23d, Peltier and Vaillant, who had charge of the canoe, were left behind. When they came up they said that the canoe had been so damaged by another fall as to be incapable of repair, and utterly useless. No persuasion could induce them, or any of the voyageurs, to go back for it, and the officers were too weak to undertake the task. To this obstinacy may be attributed the misfortunes which attended their subsequent progress. This night, a heavy rain fell, which obliterated the tracks of the hunters who had gone forward, and the men became quite furious at the idea of being abandoned by them. Some of the strongest threw down their bundles to follow, and would have left the weaker to shift for themselves, had they not been prevented by the

threats and entreaties of the officers. However, in the course of the day they came up with the hunters, who had killed five small deer, of which the Canadians with their usual improvidence consumed more than a third that evening.

On the 26th, they came to the Coppermine, five miles above where it enters Point Lake. Its current here is swift, and there are two rapids, which in a canoe they could have traversed in safety and with ease. As they could find no food, and as there was no wood at hand big enough for a raft, they were obliged to repair to the Lake in search of trees. After travelling two days along the shore, the search was abandoned as useless, and they returned to the rapid to attempt to cross on a raft of willows. While they were considering this project, the carcass of a deer was found in a crevice of a rock, into which it had fallen in the spring. It was putrid, but little less acceptable on that account, and the greater part was devoured forthwith.

In the morning of the 29th, the men began at an early hour to bind the willows in faggots for the construction of the raft, and it was finished by seven; but as the willows were green, it proved to be very little buoyant, and was unable to support more than one man at a time. Even on this, however, it was hoped the whole party might be transported, by hauling it from one side to the other; provided a line could be carried to the other bank. Several attempts were made by Belanger and Benoit, the strongest men of the party, to convey the raft across the stream, but they failed for want of oars. A

pole constructed by tying the tent-poles together, was too short to reach the bottom at a short distance from the shore; and a paddle did not possess sufficient power to move the raft in opposition to a strong breeze, which blew from the other side. All the men suffered extremely from the coldness of the water, in which they were necessarily immersed up to their waists, in their endeavours to aid Belanger and Benoit; and, having witnessed repeated failures, they began to consider the scheme as hopeless. At this time, Dr Richardson, prompted by a desire of relieving his suffering companions, proposed to swim across the stream with a line, and to haul the raft over. He threw himself into the river with the line round his middle, but when he had got a short distance from the bank, his arms became benumbed with cold, and he lost the power of moving them: still he persevered, and, turning on his back, had nearly gained the opposite bank, when his legs also became powerless and he sunk. They instantly hauled upon the line, and he came again to the surface, and was gradually drawn ashore in an almost lifeless state. Being rolled up in blankets, he was placed before a good fire of willows, and fortunately was just able to give some slight directions respecting the manner of treating him. He gained strength gradually, and through the blessing of God was enabled in the course of a few hours to converse, and by the evening was sufficiently recovered to remove into the tent. The skin of his whole left side was deprived of feeling, in consequence of expo-

sure to too great heat. He did not perfectly recover the sensation of that side until the following summer. When he stripped, the Canadians simultaneously exclaimed, 'Ah ! que nous sommes maigres !'

The next morning the men collected eight large faggots of willows, of which they constructed a larger and better raft than the first. Yet, as it did not answer their purpose, St Germain set about making a canoe of the fragments of painted canvass in which they had wrapped their bedding on the first of October. In the afternoon, one of the men found the back-bone of a deer which had been killed and eaten by wolves, but the spinal marrow still remained. This, though putrid, was esteemed a valuable prize, and the bones were rendered friable by burning, and eaten also.

On the following morning, the ground was covered with snow a foot and a half deep, and the weather was stormy. These circumstances rendered the men despondent, and they refused to gather tripe de roche, preferring to go entirely without eating to making the least exertion. The storm continued till the afternoon of the 3d, by which time St Germain had finished his canoe. By this time the officers were extremely reduced ; Mr Hood was little better than a skeleton, Mr Back could not walk without a stick, and Dr Richardson was lame, as well as weak.

On the morning of the 4th of November, St Germain embarked in his canoe, and succeeded in reaching the opposite side of the river with a line. The canoe

was then drawn back, and another person was transported, and so on till the whole party were conveyed over, except the Esquimaux Junius, who had been lost several days, and it was never known what became of him. By the frequent traverses the canoe was materially injured, so that all the garments and bedding were soaked, and there was not a sufficiency of willows to dry them. That no time might be lost, Mr Back was instantly despatched in search of the Indians, with St Germain, Solomon Belanger, and Beauparlant.

More snow fell in the night, but the Captain and his party were early on foot the next morning; yet the tents and bedding were so frozen that it was late before they could get their bundles in readiness for departure. They then followed the tracks of Mr Back and his men, and walked six miles only, their weakness allowing them to go no farther. Two of the men, Credit and Vaillant, who had been unable to digest the tripe de roche, were so exhausted, that on reaching the encampment they were unable to stand.

Before starting the next morning, the whole party ate the remains of their old shoes, and whatever fragments of leather they had, to enable them to face a piercing gale. Some of the party lagged in the rear, and toward noon Samandré came up with the front to say that Credit and Vaillant had dropped down; and Doctor Richardson went back to them, but did not find Credit. Vaillant was unable to rise or speak; and as the Doctor was unable to aid him, he returned to the party, who in the mean

while had made a fire. J. B. Belanger then went to assist Vaillant, but could not rouse him : and the strongest of the voyageurs declared themselves unable to bring him to the fire. They urged Capt. Franklin to allow them to throw down their loads and hasten to Fort Enterprise, a measure which would have destroyed them, for not one of them knew the way, and the officers would have been unable to keep up with them. However, as it was absolutely necessary to do something to lighten them, Dr Richardson and Mr Hood, with John Hepburn, proposed to remain behind at the first convenient place, while the rest proceeded to the house, whence they thought immediate relief might be sent. This measure was immediately carried into effect ; but Credit and Vaillant were, unavoidably, left to their fate.

The next day, the Captain and those who proceeded with him made but four miles ; and on encamping, Belanger and Michel declared themselves quite exhausted, and desired to be permitted to return to Dr Richardson and Mr Hood. The night was bitter cold, and, though they laid as close as possible, they could not keep themselves warm enough to sleep. Toward midnight a strong gale increased their sufferings. In the morning, Michel and Belanger received permission to go back to Doctor Richardson. The former was very particular in his inquiries respecting the route the Captain meant to pursue.

Scarcely was this arrangement made, when two more, Perrault and Fontano, were seized with diz-

ziness and other symptoms of extreme debility. They were in some degree revived by drinking a little tea, and eating a few morsels of burnt leather, and expressed a willingness to go forward. The others, however, alarmed at what they had witnessed, and doubtful of their own strength, refused to move. But on the representation of the Captain, that it was their only chance for life, they at last proceeded, leaving Michel and Belanger at the encampment.

CHAPTER XIV.

Perrault turns back.—Fontano is lost.—Captain Franklin reaches Fort Enterprise.—Misery of the Party.—Dr Richardson and Hepburn reach Fort Enterprise.—The Crimes of Michel.—Murder of Mr Hood.—Michel is put to Death.—Subsequent Progress of Dr Richardson and Hepburn.

SCARCELY had the party gone two hundred yards, when Perrault became dizzy again, and in ten minutes more declared himself unable to go any farther. As the encampment was not more than a quarter of a mile off, he turned to regain it, walking with much difficulty. The route then lay across a lake where the ice was perfectly smooth, and the men fell continually. Fontano was completely exhausted by the fatigue of the traverse, and he turned to go, first to the encampment, and then to Dr Richardson, as Perrault had done, by which the number of the party was reduced to five, viz.

Adam, Benoit, Peltier, Samandre, and Captain Franklin. Augustus had gone ahead. After they had made four miles and a half, they encamped near some willows, and supped on a few morsels of burnt leather. Augustus did not make his appearance, but this gave the Captain no uneasiness, as he supposed that if he missed the track, he would go to Dr Richardson.

The next day they gained five miles, and encamped on Winter River, and the arrival in a well-known neighbourhood raised the spirits of the men. The night was very stormy, and so was the morning; but they set out, being eager to reach Fort Enterprise that day. They saw a large herd of reindeer, but Adam, the only hunter, was too weak to pursue them. They did not reach the house that night, and when they did, the next morning, it was only to meet with grievous disappointment.

The house was desolate,—there were no traces of the Indians,—and they had made no deposit of provisions, as they had promised. The party could not refrain from tears; for not to speak of their own misery, the lives of their friends in the rear depended on sending immediate relief from this place.

There was a note, however, from Mr Back, who had left the house two days before. By it the Captain learned that he had gone in search of the Indians, and that he proposed, if he did not find them, to try to reach Fort Providence. Here, then, the party were obliged to remain and wait for whatever might befall, for they were all too feeble to travel any farther. The deerskins they had

formerly thrown away, served them for food ; and they collected bones from the ashes, which, with tripe de roche, they must eat to preserve life. In the evening Augustus rejoined them.

The next morning they were all much enfeebled, and Adam was unable to rise without assistance ; yet they were compelled to collect bones and tripe de roche. In the afternoon of the 14th, there was a storm, during which Belanger entered the house, so much exhausted that he could not speak, with a note from Mr Back, stating that he had not found the Indians, and desiring farther instructions.

On the 18th, Belanger set out to return to Mr Back, with instructions to meet Captain Franklin at Reindeer Lake, whither he proposed to proceed with the men. It appeared when about to start, that Adam was unable to move, and Peltier and Samandre agreed to remain with him. The Captain started on the 20th, with Benoit and Augustus, but breaking his snow shoes at the outset, he sent them forward and returned himself to the house, where he found Samandr  as helpless as Adam.

Captain Franklin now undertook the office of cook and nurse to the two sick men, while Peltier brought wood, and pounded the bones he collected. Thus the time wore on for some days, and it is wonderful how life lasted so long. Their strength declined daily, and when seated it was not without a great effort that they could rise again. Still Peltier persevered in collecting wood, which Captain Franklin, and Samandre, who had somewhat recov-

ered, brought to the house. So feeble were they that their utmost exertions only sufficed to replenish the fire four times a day. Once in a while they saw deer near the house, but were wholly unable to go in pursuit of them.

On the 29th, Dr Richardson and Hepburn entered the house, whose first words gave information that Mr Hood and Michel were dead, and that Perrault and Fontano had not been seen by them. The next day the new comers went in quest of deer, and fired several times at them, but without success, as they were too weak to hold their guns steady. It was not till the evening of this day that the Doctor related his adventures subsequent to parting company with Capt. Franklin. We give an abridged account of them, as follows.

It will be remembered that Dr Richardson, Mr Hood, and Hepburn were left by the party on the 8th of October. On the morning of the 9th, Michel, called the Iroquois, came to the tent, saying that Belanger, in company with whom he had been left by Captain Franklin, had started to join the Doctor two hours earlier than himself, and he supposed, must have gone astray, as he had himself done. Subsequent observations rendered it probable that this account was false, and that Belanger was killed by Michel.

The next morning, the officers, Hepburn, and Michel went to the grove of pine trees, where Michel had been left by Capt. Franklin. Here, Michel said he had left a gun which had been given him by Perrault, though it seems by Capt. Franklin's

journal that Perrault made him no such present. After making a fire, and drinking a decoction of the Labrador tea plant, the Doctor, Mr Hood, and Hepburn returned to the tent; but Michel preferred sleeping where he was, promising to join them in the morning. At his request, their hatchet was left with him.

On the 11th, Michel did not join them, and Dr Richardson and Hepburn were obliged to carry their bedding, &c. to the pines themselves, Mr Hood following them. On arriving, they were alarmed to find Michel absent, nor did he appear till night, when he stated that he had been hunting all day. He had met with no success, he said, but had found a wolf that had been killed by the stroke of a deer's horn, and had brought a part of it. His companions in misery believed this story at the time, but there are reasons to believe that the flesh he brought was that of Belanger or Perrault. It is not otherwise easy to account for his concealing from the Doctor that Perrault had turned back, or for his voluntarily encumbering himself with a hatchet, unless he meant to cut up something which he already knew to be frozen. His retaining and even gaining strength while the others were daily becoming more feeble from starvation, is another strong circumstance against him. It is still a question whether he slew Belanger or Perrault, or whether he found their bodies in the snow. Captain Franklin, who, from knowing their situation, is best able to judge, is of opinion that he murdered them. Above all, his subsequent conduct proves him to have been capable to commit such a crime.

Till the 18th, Michel behaved strangely, sometimes going out to hunt, at others refusing to do so. His general demeanor was surly, and he often threatened to leave them. Mr Hood's strength was now completely prostrated by eating tripe de roche, and was scarcely able to sit up by the fire side. He complained that every breeze seemed to blow through his frame.

On the 19th, Michel refused to hunt or assist in bringing wood, and Mr Hood remonstrated with him. Reproof only made him angry, and he used this remarkable expression. 'It is no use hunting; there are no animals; you had better kill and eat me.' At length, however, he went.

On the morning of the 20th, Dr Richardson again urged Michel to go a hunting, but he showed great unwillingness, and lingered about the fire, pretending to clean his gun. The Doctor then went to gather tripe de roche, while Hepburn was employed in felling a tree at a short distance. They were recalled to the fire by the report of a gun, and found Mr Hood dead. On examination, it appeared that a ball had entered the back part of his head, and that the muzzle of the gun had been so nigh as to singe his cap. Michel said that Mr Hood had sent him to the tent on some trifling errand, and that while he was absent the gun had gone off, he knew not how. Hepburn afterwards told the Doctor that he had heard Mr Hood and Michel talking in an angry tone, and that on hearing the gun, he had turned and saw Michel behind his victim. Thus died an officer whose talents were an

honor to his country, and whose virtues endeared him to all who knew him. Although neither Hepburn nor the Doctor dared to express any suspicion, Michel earnestly exculpated himself, and avoided leaving them together, evidently fearing to permit them to converse in private. He understood English imperfectly, and whenever Hepburn spoke, he demanded if he accused him of the murder.

Having determined to go to Fort Enterprise, the little party started on the 23d. Hepburn and Michel carried guns, and the Doctor a small pistol. Michel was very unwilling to go to the fort, and tried to persuade his companions to go to the woods, or the Coppermine, where he said he would maintain them all winter by killing deer. In consequence of his behaviour, Dr Richardson desired him to go to the woods by himself, a proposal which increased his ill-humor.

Michel was a half-breed. He now began to threaten his companions, and to express his hatred to the whites, some of whom, he said, had killed and eaten his uncle and two of his relations. In speaking to Dr Richardson, he assumed such a tone of superiority as evinced that he considered him completely in his power. In fine, the Doctor was convinced by his demeanor that he would destroy them both on the first opportunity, and had only refrained from so doing hitherto, because he did not know the way to the fort. In the course of the day, he several times remarked that they were following the same course that Capt. Franklin had done, and that by keeping toward the set-

ting sun, he could find the way himself. Hepburn and Dr Richardson were not in a condition to resist even an open attack, nor could they by any device escape from him. Their united strength was far inferior to his, and, beside his gun, he was armed with two pistols, an Indian bayonet, and a knife. In the afternoon, coming to a rock, on which there was some tripe de roche, he halted, and said he would gather it while they went on, and that he would soon overtake them. Hepburn and Dr Richardson were now left together for the first time since Mr Hood's death. The result of this conference was a conviction that there was no safety for them but in Michel's death, and Hepburn offered to be the instrument of it. Dr Richardson, however, resolved to take the responsibility on himself; and as soon as Michel came up, shot him through the head with a pistol. It then appeared that he had gathered no tripe de roche, and that he had only halted to put his gun in order, probably with the intention of killing them.

Three more days of sickness and suffering brought the Doctor and Hepburn within sight of the Big Rock, a large stone opposite Fort Enterprise. The sight gave them new vigor, and they pushed on with a resolution to get to the end of their journey that day. In the evening they saw several herds of deer, but Hepburn, who was a good marksman, was unable to hold out his gun; and though he got near them, his efforts proved fruitless. In passing through a small grove of

piners, they saw a flock of partridges, and after several shots Hepburn succeeded in killing one.

They came in sight of the fort at dusk, and were rejoiced to see the smoke curling from the chimney; for, from not having seen any footsteps in the vicinity, they had been agitated by melancholy forebodings. On entering the now desolate building, they had the satisfaction to embrace Capt. Franklin; but no words can convey an adequate idea of the filth and wretchedness that met their eyes. Their own misery had stolen on them by degrees, and they were each accustomed to the emaciated visage of the other; but the ghastly countenances, dilated eyeballs, and sepulchral voices of the Captain and those with him, were more than they could at first bear.

CHAPTER XV.

Death of Peltier and Samandré.—Extreme Weakness of the Survivors.—Their Intellects become weak.—Arrival of Indians.—Their Proceedings.—More Indians arrive.—Captain Franklin reaches the Camp of Akaitcho.—Mr Back's Adventures.—Death of Beauparlant.—End of the Journey.

IN the evening of the 31st, Peltier and Samandre complained of cold, sore throats, and cramps in the fingers. On the 1st of November, Peltier could not eat tripe de roche, and Samandre but very little of it, owing to the soreness of their throats. In the afternoon, Peltier was so far exhausted that

he sat up with difficulty. At last he slid from his stool upon his bed, as the others supposed, to sleep, and remained quiet upwards of two hours. A rattling was then heard in his throat, and on the Doctor's examining him, he was found to be speechless. Samandré sat up the greater part of the day, and even assisted to pound some bones; but the sad condition of Peltier rendered him melancholy, and he began to complain of cold and stiffness in the joints. In the course of the night Peltier died, and Samandré also expired before morning, both literally starved to death. The united strength of the survivors was inadequate to remove the bodies from the house.

Peltier had fixed on the 1st of November, as the time when he should cease to expect relief from the Indians, and had repeatedly said that if they did not arrive by that day, he should not survive. He was dear to his officers for his cheerfulness, his activity, and affectionate disposition, and up to the time of his decease he had nursed Adam with the most tender solicitude. Samandré too had been willing to share the labors of the party, but had been unable.

The task of collecting food and fuel now devolved on Dr Richardson and Hepburn, Adam being worse than ever, and Captain Franklin too feeble to render them any material assistance. As they were now unable to go in search of wood, they pulled down the logs of which the store-house was built.

On the 3d, Hepburn was affected by swellings

in his limbs, and his strength as well as that of the Doctor was rapidly declining; yet they continued full of hope. Their utmost exertions could only renew the fire thrice, and on making it up the third time they went to bed. Their stock of bones was this day exhausted.

On the 5th, the breezes were light, with dark cloudy weather and some snow. The Doctor and Hepburn were getting much weaker, and the limbs of the latter were now greatly swelled. They came into the house frequently in the course of the day, to rest themselves; and, when once seated, were unable to rise without the help of one another, or of a stick. Adam was for the most part in the same low state as before, but sometimes he surprised the others by getting up and walking with an appearance of increased strength. His looks were now wild and ghastly, and his conversation was often incoherent.

The next day was fine, but very cold. The swellings in Adam's limbs having subsided, he was free from pain, and arose this morning in much better spirits, and spoke of getting his gun ready for shooting partridges or any animals that might appear near the house; but his tone entirely changed before the day was half over: he became again dejected, and could scarcely be prevailed upon to eat. The Doctor and Hepburn were almost exhausted. The cutting of one log of wood occupied the latter half an hour; and the other took as much time to drag it into the house, though the distance did not exceed thirty yards.

Owing to their loss of flesh, the hardness of the floor gave them great pain, especially in those parts on which the weight rested; yet to turn over for relief, was an affair of toil and difficulty. The acute pains of hunger had now subsided. In the day time they conversed on light and trivial subjects, avoiding to speak of their situation, or even of the prospect of relief. In proportion as their strength decayed, their minds exhibited symptoms of weakness, evinced by a kind of unreasonable pettishness with each other. Each thought the other weaker in intellect than himself, and more in need of advice and assistance. So trifling a circumstance as a change of place, recommended by one as being warmer and more comfortable, and refused by the other from a dread of motion, frequently called forth fretful expressions, which were no sooner uttered than atoned for, to be repeated perhaps in the course of a few minutes. The same thing often occurred when they endeavoured to assist each other in carrying wood to the fire; none of them were willing to receive assistance, although the task was disproportioned to their strength. On one of these occasions, Hepburn was so convinced of this waywardness, that he exclaimed, 'Dear me, if we are spared to return to England, I wonder if we shall recover our understandings.'

November 7.—Adam passed a restless night, being disquieted by gloomy apprehensions of approaching death. He was so low in the morning as to be scarcely able to speak. Captain Franklin remained in bed by his side, to cheer him as much

as possible. The Doctor and Hepburn went to cut wood. They had hardly begun their labor, when they were amazed at hearing the report of a musket. They could scarcely believe that there was really any one near, until they heard a shout, and immediately espied three Indians close to the house. Adam and the Captain heard the latter noise, and were fearful that a part of the house had fallen upon one of their companions, a disaster which had in fact been thought not unlikely. The alarm was only momentary; Dr Richardson came in to communicate the joyful intelligence that relief had arrived. Poor Adam was in so low a state that he could scarcely comprehend the information. When the Indians entered, he attempted to rise, but sank down again. But for this seasonable interposition of Providence, his existence must have terminated in a few hours, and that of the rest probably in not many days.

The Indians had left Akaitcho's encampment on the 5th November, having been sent by Mr Back with all possible expedition, after he had arrived at their tents. They brought but a small supply of provision, that they might travel quickly. Though perfectly aware of the consequence, the sufferers ate immoderately. Dr Richardson cautioned them to refrain, but was himself unable to practise the caution he recommended. The result was that they suffered dreadfully from indigestion, in the night.

One of the Indians was instantly despatched for a fresh supply of food, while the other two re-

mained to take care of the sufferers. These kind creatures did all in their power to make them comfortable, keeping up good fires and feeding them. They also persuaded them to shave, an operation they had not performed since leaving the sea coast.

No supply arrived, and the Indians became despondent, thinking that some accident had befallen their companion. On the evening of the 13th, they departed without saying a word to any one, leaving the party a second time without food, and with appetites excited by recent indulgence. They were beginning to despair, when on the 15th, a party of Indians arrived with provisions. It was important to get among the reindeer before the present supply should fail, and they left Fort Enterprise the next morning. They made but slow progress, but the Indians treated them with a humanity that would have done honor to the most civilized people. They gave them their snow-shoes, going without themselves, and walked beside them to assist them when they fell. They prepared the encampments, cooked, and fed them like children, till, on the 26th, they all arrived at the camp of Akaitcho, where they were received with the utmost kindness. Here Capt. Franklin learned that Mr Back had gone to Fort Providence with his men.

We have not room to follow Capt. Franklin to England. Of Augustus the Esquimaux and Benoit, who left him at Fort Enterprise, suffice it to say, that he found them alive and well in the camp

of Akaitcho. The adventures of Mr Back and his men, however, who it will be remembered parted from the Captain on the 5th of October, claim some further notice.

Their sufferings on the way to Fort Enterprise, which they reached on the 10th, were scarcely less than those of Capt. Franklin and his party. On reaching the house and finding it desolate, Mr Back determined to go in search of the Indians, which resolution he carried into effect by leaving the house on the eleventh.

A lake was in their road which was not frozen; and while waiting for the ice to make, Mr Back despatched Belanger to Fort Enterprise, where he arrived, as has already been related. In his absence, Mr Back proceeded along the lake toward a place where St Germain stated that plenty of fish might be caught. They had not gone far, when Beauparlant complained of increasing weakness; but this was so common an occurrence, and all were so feeble, that no notice was taken of it. While they stopped to rest, he was told that a grove of pines near them would be the place of encampment. He desired them to go thither, saying that he would follow at his leisure, and they gained the spot accordingly. Here a flock of crows guided them to some heads of deer, half buried in snow and ice, which the previous severity of the weather had compelled the wolves to abandon. At the sight of this supply, Mr Back and St Germain exclaimed, 'O merciful God, we are saved!'

Darkness stole over them, and Beauparlant did

not arrive, though he answered to their calls. A fog rendered the atmosphere still thicker, so that they dared not go for him, lest they should not be able to find the way back. In the morning, St Germain went for him, and found him stretched on his back, frozen to death, his limbs swelled and extended, and as hard as the ice around him.

On the same day Belanger returned to Mr Back from Fort Enterprise. Mr Back would then have gone to Reindeer Lake, but the men refused to stir till they should in some degree have recovered their strength. Here then they remained, subsisting on the remains they had found till the 30th, when, having with great care collected two small packets of meat and sinews, they started on the direct road to Fort Providence.

They had the farther good fortune to take the remains of a deer from some wolves that had just killed it. After walking till the 3d, they came to the footsteps of Indians, when Mr Back and Belanger encamped, while St Germain went forward; and, arriving at the camp of Akaitcho before night, sent a supply of food to them. On Mr Back's arrival at the tents, relief was sent to those at Fort Enterprise, as before related.

Little remains to say. Care, kind attention, and improved diet gradually restored the health and strength of Captain Franklin and his fellow-travellers. By the return of spring they had nearly regained their ordinary state of health. Hepburn alone suffered from a severe attack of rheumatism, which confined him to his bed for several weeks.

On the 14th of July following, they arrived at York Factory, where they embarked for England.

CHAPTER XVII.

Second Journey of Captain Franklin.—Attack by the Esquimaux.—Description of the Esquimaux.—Their Women.—Farther Progress.—The Expedition returns.—Capt. Beechy.—Doctor Richardson's Voyage.—The Esquimaux.—Their Huts.—Observations on the Magnetic Pole.

WE shall give but a sketch of the second journey of Captain Franklin to the Polar Sea. It is not necessary to accompany him through the difficulties of rapids, portages, &c. or over that part of the continent described in previous chapters. We shall commence at where the Great Bear Lake River flowing out of Great Bear Lake, joins Mackenzie's River. Up this stream the expedition proceeded to the Great Bear Lake, where they passed the winter of 1825-6.

As soon as the season opened, the Expedition moved down the Mackenzie's River to the Ocean. Thence Dr Richardson sailed eastward along the coast, and Captain Franklin westward. The mouth of the Mackenzie's is in latitude $69^{\circ} 25'$, and longitude $135^{\circ} 41'$. The river is too well known from the account of Mackenzie, to need any description here.

Captain Franklin had scarcely cleared the mouth of the river, when he perceived a crowd of Esquimaux tents on an island, and proceeded toward

them. The water became shallow as the boats neared the island, and they grounded a mile from the beach. In a very few minutes they were surrounded with canoes, so many, indeed, that they were unable to count them. Their occupants amounted to some hundreds of men. A barter was begun, and the savages at last becoming troublesome from their eagerness, Captain Franklin determined to leave them. It was too late; the tide had ebbed too far, and the boats were fast aground. In this situation it happened that a canoe was upset by the stroke of an oar, and the wet savage was taken into the Captain's boat, wherein he discovered many bales and other articles. He communicated his observations to his comrades, who then commenced a general pillage, which was resisted by the whites, without, however, much violence on either side. At the request of Captain Franklin, these people retired, but it was only to concert a plan of attack. They returned, and laying hands on the boats, dragged them high and dry on the beach. Then, drawing their long knives, they renewed their depredations, handing the articles, as they took them, to the women, who quickly conveyed them out of sight. They received blows, even with the butts of muskets with much indifference, and brandished their knives in a furious manner; but in two instances only did they attempt to stab. The whites manifested much forbearance, during these proceedings, which lasted several hours; but at last, as the tide was rising, Lieut. Back directed his men to level their muskets, and the savages fled. As the boats left the beach,

they prepared to follow; but on hearing Captain Franklin threaten to fire on them, they desisted.

The boats grounded again, and Augustus, the interpreter, waded ashore, and rebuked them for their conduct; notwithstanding which, when the boat got again in motion, they followed, and were only prevented from attacking by fear of the fire-arms. As these people were like all the Esquimaux subsequently seen, in dress, personal appearance, &c. a description of them will serve for the whole; though it was remarked that the farther the whites advanced westward, the nearer the features of the natives resembled those of Tartars. Every man had pieces of shells thrust through the septum of his nose; and bone or holes were pierced on each side of the under lip, in which were placed circular pieces of ivory, with a large blue bead in the centre, similar to those represented in the drawings of the natives on the N. W. coast of America, in Kotzebue's Voyage. These ornaments were so much valued, that they declined selling them; and when not rich enough to procure beads or ivory, stones and pieces of bone were substituted. These perforations are made at the age of puberty; and one of the party, who appeared to be about fourteen years old, was pointed out, with delight, by his parents, as having to undergo the operation in the following year. He was a good-looking boy, and Capt. F. could not fancy his countenance would be much improved by the insertion of the bones or stones, which have the effect of depressing the under lip, and keeping the mouth open.'

With regard to the women, Captain Franklin observes,

‘ Their own black hair is very tastefully turned up from behind to the top of the head, and tied by strings of white and blue beads, or cords of white deer-skin. It is divided in front, so as to form on each side a thick tail, to which are appended strings of beads that reach to the waist. The women were from four feet and a half to four and three-quarters high, and generally fat. Some of the younger females, and the children, were pretty. The men, when sitting for their portraits, were more sedate, though not less pleased, than the females : some of them remarked that they were not handsome enough to be taken to our country.’

Having passed the first range of the Rocky Mountains, between it and the second, a large river, at least two miles broad, was observed to empty itself into the Polar Sea, after coming, as the Esquimaux informed them, from a distant part of the interior. Near to Herschel’s Island, in latitude $69^{\circ} 33'$ N., longitude $139^{\circ} 3'$ W., was another river, which they called the Mountain Indian River. Here they fell in with a party of Esquimaux, who traded up that river and to the westward with their countrymen, who obtain their goods from white people, and which Capt. Franklin had no doubt, from the appearance of the articles, were of Russian manufacture. There is another large river, to which they gave the name of Clarence : here they found among the drift timber on the beach a pine-tree, seven feet and a quarter in girth and thirty-six feet long, and

many others were seen of not much inferior size, which must have grown considerably to the southward.

It was the 16th of August before the boats reached the half-way point between the Mackenzie's River and Icy Cape, being often detained by ice and by contrary winds, &c. Captain Franklin, therefore, determined to turn back. Captain Beechy, who, with the view of meeting Captain Franklin, had sailed to Bhering's Straits, proceeded an hundred and twenty miles beyond Icy Cape, or within a hundred and sixty miles of the spot whence Captain Franklin turned back. On the 24th of August, he reached a low, sandy point, extending so far north that he was unable to proceed round it, and it was with much difficulty that he got back to his vessel.

The distance of the coast, traced westward from the mouth of the Mackenzie, was three hundred and seventyfour miles, without one harbour in which a ship could find shelter. It is, in fact, one of the most dreary, miserable, and uninteresting portions of sea-coast to be found in any part of the world.

On the 21st of September, this western expedition reached Fort Franklin, where they had the happiness of meeting all their friends, the eastern detachment under Dr Richardson having arrived on the 1st, after a most successful voyage, at which we must now take a passing glance.

Dr Richardson was much more fortunate than the western party in the nature of the navigation he had to perform, and of the coast between the mouths

of the two rivers. It is a voyage of about five hundred miles, which he accomplished between the 4th of July and the 8th of August. The Esquimaux they met with on various parts of the coast, as well as on the islands formed by the reaches of the Mackenzie's River, were more numerous, more peaceable, and, apparently, more wealthy, than those to the westward; but, like all savage nations, they neglected no opportunity of stealing, while carrying on barter, whatever they could lay hands on. However, with the exception of one party, who had about fifty kaiyacks, no violence was attempted. This exception was occasioned by the boats grounding, when an attack, similar to that on Capt. Franklin, was made, but immediately repelled by the show of fire-arms, the use of which the aggressors appeared perfectly to understand,—the result, no doubt, of experience acquired in contest with the neighbouring Indians.

Their winter-huts are of a superior kind; they are met with in whole villages, constructed of drift-wood trees, planted generally in the sand with the roots uppermost. 'These villages,' says Dr Richardson, 'when seen through a hazy atmosphere, frequently resembled a crowd of people, and sometimes we fancied they were not unlike the spires of a town appearing above the horizon.' The size and quantity of this timber is quite surprising. One straight log of spruce fir is mentioned, thirty feet long, seven feet in circumference at the small end, and twelve a short distance above the root. 'There is such an abundance of drift-timber,' says Dr

Richardson, 'on almost every part of the coast, that a sufficient supply of fuel for a ship might easily be collected; and,' he adds, 'should the course of events ever introduce a steam-vessel into those seas, it may be important to know that, in coasting the shores between Cape Bathurst and the Mackenzie's, fire-wood sufficient for her daily consumption may be gathered.'

Doctor Richardson then proceeded up the Coppermine to the portage between that river and Great Bear Lake, by which he returned to the quarters of the preceding winter, and so ended the travels of the expedition, so far, at least, as we have anything to do with them.

The lowest temperature witnessed by the expedition was on the 7th of February of the second winter passed at Bear Lake. The mercury descended to -58 , having stood at about -57° for two days.

A few remarks respecting the magnetic pole must close this chapter. Its position, as computed from Capt. Franklin's observations by Professor Barlow, is in $69^{\circ} 16'$ north latitude, and $98^{\circ} 8'$ west longitude, and by the observations of Captain Parry in lat. $70^{\circ} 43'$ north, long. $98^{\circ} 54'$ west, its mean place being in lat. $70^{\circ} 0'$ north, long. $98^{\circ} 31'$ west, which is between Port Bowen and Fort Franklin; the former being situated in lat. $73^{\circ} 14'$ north, long. $88^{\circ} 54'$ west, and the latter in $65^{\circ} 12'$ north, long. $123^{\circ} 12'$ west. It appears, therefore, that during the same months, at the interval of only one year, Captains Parry and

Franklin were making hourly observations on two needles, the north ends of which pointed almost directly towards each other, though their actual distance did not exceed eight hundred and fiftyfive geographical miles; and while the needle of Port Bowen was increasing its westerly direction, Capt. Franklin's was increasing its easterly, and the contrary,—the variation being west at Port Bowen and east at Fort Franklin; a beautiful and satisfactory proof of the solar influence on the daily variation.

NOTICE OF KOTZEBUE'S VOYAGE.

Arrival of Lieut. Kotzebue at Cape Prince of Wales.—Discovery of a fourth Island in the Gwozdeff Group.—Dwellings of the Natives.—Conduct of the Savages.—Appearance of the Land.—The Natives.—Ice-Bergs on Land.—Researches in Kotzbeue's Sound.—Advantages of this Discovery.

THE voyage of Lieut. Kotzebue of the Russian navy was undertaken with the purpose of effecting a passage round the northern coast of America by the way of Bhering's Strait. That, and the only part of it which comes within the scope of our undertaking, relates to the proceedings of Lieut. Kotzebue subsequent to leaving Kamschatka.

On the 30th of July, 1817, the *Rurick*, Mr Kotzebue's vessel, came in sight of Cape Prince of Wales, the Asiatic coast being visible at the same time, as well as Gwozdeff's Islands. According to Cook, there are three islands in this group; but Mr Kotzebue discovered a fourth, much larger than the rest, which he called Ratmanoff's Island. A low land extends from Cape Prince of Wales to the westward, on which groups of natives were seen. The coast appeared green, but no trees were observed. Many habitations were seen, indicating a numerous population.

Taking an east-northeast direction, the *Rurick* came to a bay, which Mr Kotzebue determined to explore, and accordingly landed near some huts, into which he went. The inhabitants had fled. The interior of these dwellings was cleanly and

convenient. The whites first entered an apartment ten feet long, seven broad, and seven high. The walls were of mud, but were covered on the outside with wood. From this room they crept, through a pit, into another, and from thence to a spacious anti-room, the four walls of which were ten feet long and six feet high. The permanent construction of these buildings indicated a settled people, and the piles of blubber found in them showed that they drew their subsistence from the sea.

After looking about, Mr Kotzebue discovered that he was on an island, and that there was a deep bay to the eastward, into which the *Rurick* sailed a short distance. Here they saw two of the natives, who were afraid to hold communication with them. Their clothing was made of the intestines of whales; their appearance was very filthy, and their countenances had an expression of ferocity. This bay received the name of Schischmareff. Before the *Rurick* left it, more of the savages approached her, with threats; but were daunted at the sight of the sabres of the crew, having probably been made acquainted with the use of this weapon by the savages of the opposite coast of Asia. They were dressed in short garments of reindeer skin, and wore their hair short. They also had walrus bones under their lips, which gave their disagreeable countenances a disgusting appearance.

Proceeding along the coast, it was observed that the shore vanished in the east, and high mountains were seen to the northward. Lieut. Kotzebue

now flattered himself that he was at the entrance of the much desired northeast passage, and his observations from a hill on shore confirmed him in the opinion. No land was to be seen to the eastward, and he supposed that the mountains to the northward either formed islands, or were a coast by themselves. From the eminence where he stood, there was an extensive view into the country, which stretched out into a large plain, here and there broken by ponds and marshes. As far as the eye could reach, the earth was green and there were flowers in blossom; but on penetrating six inches, ice and frost were found everywhere. While sitting here, five canoes, with each from eight to ten Indians, landed near the whites. The savages left most of their arms in their canoes, but retained their knives, which, like the Esquimaux, they concealed in their sleeves.

These people had probably never seen Europeans before; yet they were acquainted with the use of tobacco, which they chewed and smoked. They were of a middle size, ugly and dirty, and healthy in appearance. Their motions were lively, and they seemed inclined to merriment. Their features had an expression of wantonness, but not of stupidity. In some particulars they resembled the Esquimaux; for instance, in the size and obliquity of their eyes, and in the practice of wearing walrus bones stuck through the sides of their mouths. They understood trading very well, and were very happy when they imagined they had cheated their visitors. Their arms were spears,

bows, arrows and knives. Their spears were of iron, like those sold by the Russians to the Ischukutskoi; their beads also, which were like those worn by the savages of Asia, prove that they have some intercourse with that continent.

Sailing up the opening, on the 3d of August, the *Rurick* came to an opening five miles broad, which appeared to run without impediment to the horizon, and Lieut. Kotzebue was still persuaded that he had entered the northeast passage. On the 7th, the *Rurick* came in sight of the bottom of the inlet. Here the land rises a little from the water, and is covered with moss. Some of the party remained on shore here a whole day, and made a very remarkable discovery.

They had clomb much about without discovering that they were on real ice-bergs. Dr Eschscholtz, who had extended his excursions, found part of the bank broken down, and saw, to his astonishment, that the hill consisted of pure ice. At this news, all went, with picks and shovels, to examine the place, and soon arrived where the bank rose almost perpendicularly from the sea to the height of an hundred feet, and then ran off much higher. They saw masses of pure ice an hundred feet high, under a cover of moss and grass. In the ruptured part, a great number of mammoths' teeth and bones were exposed by the melting. The covering of these bergs, on which grass grows luxuriantly, is only half a foot thick, and consists of a mixture of clay, sand and earth. In the back

ground of this bay, there is a range of high mountains. The latitude is $66^{\circ} 15'$ north.

Lieut. Kotzebue continued to explore this great inlet till the 14th of the month, in the hope of finding a passage eastward, or at least a river; but his labors were useless, as it finally became certain that no passage existed here. Mr Kotzebue gave the gulf his own name, and it is marked on the map as Kotzebue's Sound.

During his perquisitions in this quarter, he saw many of the natives, who resembled those already described. One only of them could be persuaded to come on board the *Rurick*. He was a robust young man, who appeared to be a chief. His astonishment at what he saw in the vessel was great; he looked about for a quarter of an hour without speaking, and then went away to communicate his observations to his people.

On one occasion, they were seen eating. A seal which had just been killed was cut open in the middle, and they put their heads into the belly to suck the blood, one after another. After they had drank sufficiently in this manner, a piece of flesh was cut off and eaten raw by each, and they fed with great appetite.

It is impossible to say, from the data furnished by Lieut. Kotzebue, whether these people were Esquimaux or not. He has not given us any remarks on their language, or the manner in which their weapons, canoes, &c. are constructed. Of their canoes, he only says that they were made of leather. Their clothing, as he describes it, was unlike

the dresses seen by Capt. Franklin; but in their manner of life and physical appearance, they in a great measure resemble the Esquimaux.

On the 14th of August, the *Rurick* reached the promontory which forms the northern entrance of Kotzebue's Sound, to which the name of Cape Krusenstern was given. What the Lieutenant, on entering the gulf, took for islands in the north, proved to be very high lands: on a low point, which extends from it to the west, many huts were seen. The inhabitants were running about on the shore, and some of them endeavoured to come to the vessel in canoes, but in vain, as the wind was in her favor.

From Cape Krusenstern the land forms a bend to the northeast, and then inclines to the northwest, where it ends in a very high promontory, supposed by Lieut. Kotzebue to be the Cape Mulgrave of Capt. Cook. It is in latitude $67^{\circ} 45'$.

According to his instructions, Lieut. Kotzebue should have looked for a safe anchoring place in Norton Sound, and thence have proceeded the next year to examine the coast; but as he had now discovered a convenient anchoring place, he deemed a voyage to Norton Sound quite unnecessary. He therefore determined to return to the Asiatic coast.

The discoveries of Mr Kotzebue on the Northwest coast of America began and ended at the sound which bears his name. Inconsiderable as this may be, it is still an important acquisition to geography; for, in truth, even Capt. Cook treated this coast rather negligently. This gulf may in time

be of essential advantage to the fur trade, as the animals are there found in abundance. Besides, the navigation of Bhering's Strait has hitherto been dangerous, because the masters of ships, in case of wreck or other accidents, knew no port where they might run for shelter. This difficulty is now removed, and those who shall in future visit this part of the coast will find the essential benefit of the discovery.

Though the crew of the *Rurick* often threw out their lines, they caught no fish, nor were any seen on all the American coast. Mr Kotzebue is, therefore, of opinion that there are none, or that they do not resort thither in summer. Of sea animals there is abundance, on which the natives appear to subsist entirely.

Dr Eschscholtz, who daily observed the water in the sound with an areometer, found it very fresh, which probably arises from the melting of ice, or perhaps there is a large river in the vicinity, which escaped observation. On the whole, it was found that the water on the American coast contains much less salt than that on the Asiatic.

The mean height of the thermometer out of Kotzebue's Sound was $+9^{\circ}$; within it, the average was $+11^{\circ}$, all of which must be understood of the American coast only.

We have now accomplished what we proposed to do, as far as our abilities and limits permitted. Many things have been unavoidably omitted; but we trust that we have given every material fact connected with our subject.

APPENDIX.

A full description of the forms, habits, &c. of the animals found in the arctic regions would suffice to fill a quarto, at least. Therefore we premise, that our brief account of the most remarkable will necessarily be imperfect. We refer those who wish to be better informed on this subject to Dr Richardson's complete and elegant work, the *FAUNA BOREALI AMERICANA*.

URSUS MARITIMUS. (Cuvier.) *The Polar Bear*.

This animal is distinguished from the other species by its narrow head and muzzle, prolonged on a straight line with the flattened forehead; its short ears; long neck; the greater length of its body in proportion to its height; the soles of the hinder feet equalling one sixth of the length of its body; and, lastly, the quality of its fur, which is very thick and long on the body, still more so on the limbs, and every where of a yellowish white color. The naked extremity of the snout, the tongue, margins of the eyelids, and claws, are black; the lips purplish black, and the interior of the mouth pale violet. It resides mostly on fields of ice, and is found on all the Asiatic coasts of the Frozen Ocean as well as in Spitzbergen, Nova Zembla, Greenland, Labrador, the shores of Hudson's and Baffin's Bays, and sometimes along the northern shore of America. The female produces two young at a time. Its length, when full grown, is eight feet eight inches, and its weight is sixteen hundred pounds. The polar bear is carnivorous.

URSUS HORRIBILIS. (Say.) *The Grizzly, or Grisly, Bear.*

Inhabits the western prairies and Rocky Mountains, as far north as latitude 61° , perhaps still farther. Its fur is long, and of a dark brown color, with paler tips, that on the flanks being lighter in summer, and there is often a mixture of grey hairs on the head. The muzzle is pale. It is distinguished from the black and brown bears, by shorter and more conical ears, placed further apart, and white, arched, and very long claws, compressed like the incisors of a squirrel, carrying their breadth on their upper surface nearly to the tips, and are sharp underneath. They project far beyond the hair of the foot, and cut like knives, when the animal strikes a blow with them. The forehead is broad, flattish, and continued nearly in a line with the nose ; but in the older animals there is a distinct projection of the superciliary ridges of the frontal bone. The soles of its feet are longer and its heels are broader than those of the brown bear of Europe. Its tail is so short as to be hidden by the hair of the buttocks.

The strength and ferocity of the grizzly bear are very great. When full grown it measures more than nine feet in length, and weighs upwards of eight hundred pounds. It is carnivorous, but when flesh is not to be had, does not reject vegetable substances. Pregnant females and cubs hibernate, but the older males come abroad in the winter, in quest of food.

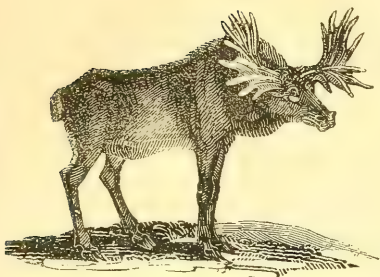
URSUS ARCTICUS AMERICANUS. *Barren Ground Bear.*

This animal differs from the common black bear in its greater size, profile, physiognomy, longer soles, and tail ; and from the grizzly bear in color, and in the comparative smallness of its claws. It inhabits the barren country north and east of Great Slave Lake, and extending to the Frozen Sea, whither it repairs in autumn, to feed on fish.

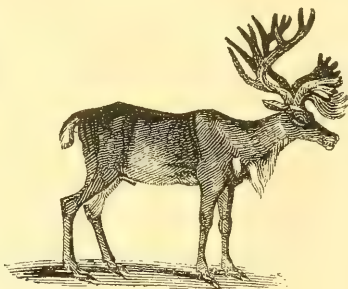
The color of this bear is dusky brown, but the shoulders and flanks are, at least in the summer season, covered with long hair, often very pale towards the tips. It preys indiscriminately on animal and vegetable substances.

The forehead of the barren ground bear is broad, slightly convex, and the arch of the orbit rises conspicuously at the root of the nose, which is straight. The legs are long, and the claws

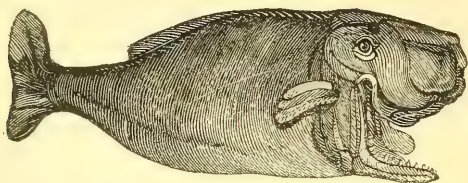
ILLUSTRATIONS FOR POLAR REGIONS.



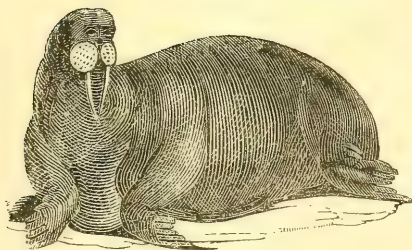
Moose. p. 491.



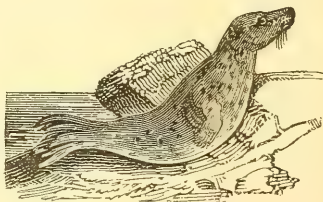
Reindeer. p. 490.



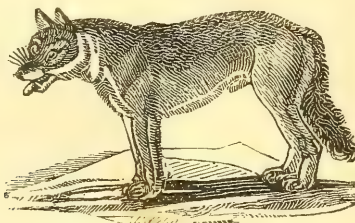
Spermaceti Whale.



Walruss. p. 501.



Seal. p. 496.



Wolf.



ILLUSTRATIONS FOR POLAR REGIONS.



Grizzly Bear. p. 486.



Grizzly Bear waiting for a Man up a Tree.

ILLUSTRATIONS FOR POLAR REGIONS.



Cutting up a Whale. p. 73.

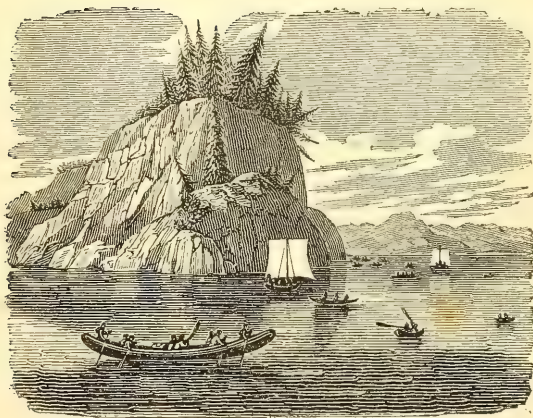


Harpooning a Whale. p. 81.

ILLUSTRATIONS FOR POLAR REGIONS.



Travellers Resting at Night. p. 370.



Crossing a Lake. p. 404.

more pointed than those of the grizzly bear. The length of an individual examined by Dr Richardson was five feet two inches.

This animal does not possess the courage of the grizzly bear, and does not often attack the human race.

WOLVES.

We deem it unnecessary to describe this animal, as it is well known to all, at least the common kind. It is believed that the difference of color is merely accidental. The *canis nubilus* of Say, or dusky wolf, is a variety distinguished from the others by its shorter ears and more robust form. It is found at Great Slave Lake, and probably still farther north.

CANIS BOREALIS (Desmarest.) *Esquimaux Dog*.

The Esquimaux dog nearly resembles the common grey wolf in form, color, and size. It has short conical ears, but its nose is shorter than that of the wolf. The nose, cheeks, and belly are white. The back and the top of the head are almost black, but there is a narrow, white line along the spine. Its sides are thinly covered with long, black, and some white hairs, and there is a shorter, dense coat of yellowish grey wool, which is partly visible. The length of the animal is four feet three inches; with the tail, which is curled, five feet five inches.

CANIS LAGOPUS. *Hare Indian Dog*.

This animal has a mild, demure countenance. It has a small head, slender muzzle, erect, thick ears, oblique eyes, slender legs, hairy feet, and a curled bushy tail. It has long hair, especially about the shoulders, and at the roots of the hair there is a thick wool. The hair on the top of the head is long, and on the posterior part of the cheek it is not only long but directed backwards, giving the animal, when the fur is in prime order, the appearance of having a ruff round its neck. Its face, muzzle, belly, and legs are pure white, and there is a white central line passing over the crown of the head and occiput. The anterior surface of the ear is white, the posterior yellowish grey. The end of the nose, the eye-lashes, the roof of the mouth, and part of the gums are black. There is a dark patch over the

eye. On the back and sides there are larger spots of dark grey, not definite in form, but running into each other. The tail is white beneath and at the tip. The feet are covered with hair which almost conceals the claws. The soles are bare.

This animal is rather larger than the common red fox. It is playful and affectionate, but not docile. It is fond of being caressed, and rubs its back against the hand, like a cat.

CANIS LAGOPUS. (Linn.) *Arctic Fox*.

In winter, the arctic fox is pure white, except at the tip of the tail, where there are a few dark hairs. Before the eyes, and on the lower jaw, the hair is short and sleek ; on the forehead and posterior part of the cheeks, it is longer, and on the neck and occiput it equals the ears in length, and is mixed with soft wool, of which there is also a great deal on the body. The long fur on the posterior part of the cheeks is directed backward, giving a cast to the physiognomy, and an apparent thickness to the neck, which are common to all the animals of this genus in the northern parts of America. It has shorter and rounder ears than any variety of the red fox. In summer, the white hair falls off, and is replaced by a shorter coat more or less colored. Its length is two feet one inch without the tail, which measures a foot more. The weight is about eight pounds. Though the arctic fox suffers himself to be easily taken, he is by no means deficient in sagacity. When taken, he is easily tamed.

Arctic foxes inhabit the most northern lands yet discovered ; their southern limit is in latitude about 50°. They breed on the sea-coast, chiefly within the arctic circle, in burrows, not solitary, but in little villages, twenty or thirty burrows adjoining to each other. They feed on eggs, birds and carrion of any kind, but their principal food seems to be lemmings.

LEMMINGS.

There are several kinds of lemmings in the northern regions of America. Dr Richardson classes them as a subdivision of the genus *arvicola*, characterized principally by the shortness of the ears and tail, and the larger and stronger claws, more fitted for digging. The Lapland lemming inhabits alpine swamps, in lat-

itude 56°. Back's lemming is found on the banks of the Coppermine, where it burrows in the turf. Another species is called the *arvicola helvolus*, and is armed with a thumb-nail. The Hudson's Bay lemming inhabits Labrador, the western coast of Hudson's and Baffin's Bays, and the islands in the polar sea, where it burrows under stones in dry ridges. It is easily tamed. The Greenland lemming is found in Greenland and on the opposite coast of America. These animals are all very like the lemmings of the old continent, in size, habits and appearance.

GULO LUSCUS. (Sabine.) *The Wolverine.*

This animal is found along the coast of America, from Labrador and Davis' Straits to the shores of the Pacific. Its length is three feet four inches, including the tail, which measures ten inches. It has a broad, compact head, and in the shape of its jaws resembles a dog. The back is arched, the tail bushy, the legs short, and its whole aspect indicates strength, but not activity. The fur is like that of the black bear, but neither so long nor so fine. Its color is a dark brown. The claws are strong and sharp. Its tracks are like those of a bear, but are distinguished by the steps not being so long.

This animal is also called the carcajou. It is carnivorous, and feeds principally on the carcasses of animals that have been killed by accident. It is very strong, and annoys the natives, by destroying their hoards of provision and demolishing their traps. It will follow the track of a marten trapper a long distance, merely to get the baits from his traps, which are usually the heads of partridges or small bits of meat. When they find any martens in them, they tear them to pieces, and hide them in the snow. The female wolverine brings forth from two to four young in a year.

CERVUS TARANDUS SYLVESTRIS. *Woodland Caribou.*

The country of this deer is a stripe of low, primitive rocks, about an hundred miles wide, extending, at the distance of eighty miles from the shores of Hudson's Bay, from Lake Athabascow to Lake Superior. Contrary to the practice of the barren ground caribou, this animal travels southward in the spring. They pass the Nelson and Severn Rivers in May, in large herds, and return to the northward in September.

CERVUS TARANDUS. (Linn.) *The Reindeer, or Caribou.*

Inhabits Spitzbergen and the northern extremity of the old continent, and has long been well known ; but it remains to be ascertained if the Caribou of America is the same species, though in all known particulars there is a great resemblance. They are found in Greenland, Labrador, and Newfoundland. They pass the summer on the sea shore or the barren grounds, and in winter retire to the woods.

CERVUS TARANDUS, var. ARCTICA. *Barren Ground Caribou.*

This variety is of small stature. The buck, when in good condition, weighs from ninety to an hundred and thirty pounds. The old males have large palmated horns ; the young ones and the does have them less branched and more cylindrical and pointed. During the growth of the horns, they are covered with a soft hairy skin, which is like velvet to the touch, and in their early stage their interior is of a consistence somewhat like marrow. They become indurated as they increase in size, and their hairy covering shrivels and peels off.

In the month of July the barren-ground caribou sheds his winter covering. The closeness of its hair and the lightness of its skin renders the latter peculiarly suitable for winter garments.

Those of this species which resort to the Arctic Sea in summer retire in the winter to the woods between the 63d and 66th degree of latitude, where they feed on lichens and the long grass of swamps. In May, the females proceed toward the sea, and toward the end of June the males take the same direction. Soon after their arrival on the coast, the females produce their young, and they commence their retreat southward in September, after the snow has fallen. Except in the rutting season, the males and females live separately ; the former retire deeper into the woods in winter, while herds of gravid does remain on the skirts of the barren grounds, and proceed to the sea very early in the spring. Capt. Parry saw deer on Melville Island as late as the 23d of September, and the females with their fawns made their first appearance on the 22d of April.

Without the herds of caribou, the Indians of the Mackenzie and Coppermine would be unable to remain in their country.

They form fish-hooks and fish-spears of its horns, and before the introduction of iron, made ice-chisels and other instruments of them. The flesh serves for food, and the skin for clothing, tents, snares, nets, and in short for all the purposes of line and rope.

CERVUS ALCES. (Linn.) *Original, or Moose.*

Inhabits the northern parts of America, and was formerly found in the state of Maine. Like the reindeer its horns are palmated. It is a solitary animal, has the sense of hearing in great perfection, and is extremely shy and wary as well as timid. In the rutting season, or when wounded and brought to bay, the males become ferocious, and attack every creature that comes in their way, even man himself. The moose is capable of enduring great fatigue, sometimes running four days before the hunter in deep snow, before it can be overtaken. It is easily domesticated.

The moose attains the weight of eleven or twelve hundred pounds : its horns weigh upwards of fifty pounds, and its shoulders are higher than those of the horse. The neck is short and strong, and the head is more than two feet in length, withal clumsily shaped, swelling on the nostrils and the upper part of the nose. The eye is small and sunken, the ears asinine, the neck and withers are surmounted by a heavy mane, and the throat is covered with long hair and encumbered by a pendulous gland. The body is short, round, and compact ; the tail is no more than four inches in length, and the legs are very long, but clean and firm.

Its movements are heavy, and the shoulders being higher than the croup, it does not gallop, but shuffles along, its joints cracking at every step. Increasing its speed, the hind legs straddle to avoid treading on its fore feet. In its progress, it holds its nose up so that the horns lie horizontally backward.

The legs of the moose are so long and its neck so short, that it cannot graze like other deer, but browses on high plants and the leaves of trees. In winter, they feed on willows, and the smaller branches of the birch ; and though they have no front teeth in the upper jaw, the branches severed by them have the appearance of having been cut by a gardener's shears.

The flesh of the moose is esteemed a delicacy.

ARCTOMYS (SPERMOPHILUS) PARRYI. (Richardson.) *Parry's Marmot.*

Inhabits the barren grounds skirting the sea-coast from Churchill in Hudson's Bay, round by Melville Peninsula, and the whole northern shore of the continent to Bhering's Straits. Abounds near Fort Enterprise, and in all the northern parts of America. It is generally found in stony districts, but seems chiefly to delight in sandy hillocks among rocks, where burrows are seen crowded together. One of the society sits erect on the summit of the hillock, while the others are feeding, and gives the alarm on the approach of danger. When their retreat to their burrows is cut off, they will hide their heads in the first crevice, leaving their hinder parts exposed. Their cry in this case is something like the sound of a watchman's rattle. Their food is entirely vegetable, and they lay up a stock of it, never going abroad in the winter.

Parry's marmot has cheek pouches, very short ears, and is thickly spotted above with white on a grey or black ground. Its length is about a foot, and that of its tail is about three inches. There are two varieties of this animal.

THE MUSK OX. *Called Uming Mak, by the Esquimaux.*

The most barren and forbidding of the regions exposed to the influence of winter are the favorite resorts of the musk ox, which there appears to derive as much enjoyment from existence as the animals found in milder climates and more fruitful lands. Destined to be constantly exposed to frost and storm, nature has taken good care to secure it against the effects of both ; first, by covering its body with a coat of long dense hair, and then, by shortening its limbs, avoiding the exposure which would result from a greater elevation. The projection of the eyes seems to be intended to carry the organ clear of the great quantity of hair upon its head.

Musk oxen are found in the greatest numbers within the Arctic circle : considerable herds are sometimes seen, near the coast of Hudson's Bay from Knapp's Bay to Wager River. They have, though rarely, been seen as low as latitude 60° N. When they feed on open grounds, they prefer the most rocky and precipitous situations. Notwithstanding their bulk, and

apparent unwieldiness, they run well, and climb rocks with the ease and agility of goats. Their favorite food is grass ; but when it is not to be had, they feed on moss, willows, and the tender shoots of pine.

The appearance of the musk ox is singular and imposing, owing to the shortness of the limbs, its broad, flattened, crooked horns, and the long hair which envelopes the whole of its trunk, and hangs down nearly to the ground. When full grown, it is ten hands and a half high, and weighs about seven hundred pounds. Its tail is no longer than that of a bear, and is entirely hid by the hair of its hinder parts. The hunch on the shoulders is small. The hair is in some parts very long, especially on the belly, sides and hind-quarters; but the longest, particularly on the bulls, is under the throat, extending from the chin to the lower part of the chest, between the fore-legs, where it is as long as the mane of a horse.

Musk oxen commonly go in herds of eighty or an hundred, of which a very small proportion are bulls. It is uncommon to see more than two or three full-grown males even with the largest herds. The Indians suppose that the males destroy one another, in combating for the females ; an opinion which is corroborated by their pugnacious disposition during the rutting season. The bulls are then so jealous of everything that approaches their mates, that they not only attack men and quadrupeds, but run after ravens or other large birds.

When cut up, the flesh of the musk ox has the appearance of beef for the market. The flesh of the young cows and calves is palatable, but that of the old bulls is intolerably musky. A knife used to cut up such meat is so strongly scented, that much washing and scouring is necessary to remove the scent.

The horns of this animal are converted into cups and spoons, by the Indians and Esquimaux ; and the skin makes good shoe soles.

In August and September, the musk oxen extend their migrations to the North Georgian and other islands bordering the northern shores of the continent. Before the first of October, they have all left the islands and moved south.

THE NARWAL, *Narwhale*, or *Sea Unicorn*.

We have given as much room to the description of the whale as we can spare, in that part of our volume which treats of Greenland. We shall therefore proceed to describe the narwal, which is found only in the arctic seas.

The vertebral column of the narwal is about twelve feet long. There are seven cervical, twelve dorsal, and thirtyfive lumbar and caudal vertebræ,—in all fiftyfour, of which twelve are in the tail. The spinal marrow runs through them all, from the head of the fortieth, but does not penetrate the forty-first. The spinous processes diminish in length from the fifteenth lumbar vertebræ, until they are scarcely perceptible at the nineteenth. There are twelve slender ribs, six true and six false on each side. The sternum is heart shaped, with the broad part anteriorly.

When full grown, the narwal is from thirteen to sixteen feet long, exclusive of the tusk ; and at the thickest part, which is two feet behind the fins, the circumference is about eight or nine feet. The perpendicular diameter, at the distance of twelve or fourteen inches from the tail, is about one foot ; the transverse about seven inches. The back is depressed, and flat, three or four feet posterior to the neck.

The head forms about one seventh of the whole length of the animal, being small, blunt and round. The mouth is small, and incapable of much extension, with a wedge-shaped under lip. The largest diameter of the eyes is about an inch, and they are placed on a line with the opening of the mouth, about thirteen inches from the snout. The opening of the ear is six inches behind the eye, and is of the diameter of a small knitting-needle. The skull is concave above, and sends forth a large, flat, wedge-shaped process in front, which affords sockets for the tusks.

The spiracle or blow-hole is situated immediately over the eyes, and is a single semicircular opening, of about three and a half inches in diameter, and one inch and a half long. It expands immediately within the skin into a sac, or air-vessel, which extends laterally and forward into two cavities, one on each side. At the posterior extremity of the sac, the blow-holes are seen divided into two distinct canals in the skull, and are closed by a valve, one lobe of which covers each canal.

The fins are twelve or fourteen inches long, and six or eight broad, at one-fifth of the length of the animal from the snout. They are not used in swimming or turning, but merely to preserve the balance of the animal. The skin resembles that of the whale, excepting that it is thinner. The cuticle is about as thin as writing-paper ; the rete mucosum three-eighths or three-tenths of an inch thick ; the cutis thin, but strong and compact, on the outside.

The most remarkable peculiarity of this animal is the long spiral tusk, which has obtained for it the name of unicorn. It grows from the left side of the head, and is sometimes nine or ten feet long. It projects from the inferior part of the upper jaw, and points forward and slightly downward, being parallel in direction to the roof of the mouth. It is spirally striated from right to left, and tapers to a round, blunt point. It is of a yellowish white, and consists of a compact kind of ivory, and is usually hollow from the base to within a few inches of the point. A tusk of the average length, five feet, is about two inches and a half in diameter at the base, one inch and three-fourths in the middle, and about three-eighths within an inch of the end. In such a tusk there are five or six turns of the spiral, which extends to within six or seven inches of the point. In addition to this external tooth, peculiar to the male, there is another on the right side of the head, about nine inches long, imbedded in the skull. Some instances have occurred of male narwals having been taken which had two external tusks. What purpose this weapon is intended to serve has never been ascertained.

The narwal is a harmless animal, of an active disposition. While at the surface, these creatures, for the sake of respiring, frequently lie motionless for several minutes, with their heads and backs just above water. Occasionally small herds are seen together, each consisting of individuals of the same sex.

The narwal feeds on molluscous animals, such as the cuttlefish, &c. Its whole body is covered with a layer of blubber, immediately under the skin, which yields a considerable quantity of fine oil. The Esquimaux employ the whole animal in various uses. The flesh is eaten, the oil burned, the intestines wrought into lines and clothing, and the tusks are used for spears.

SEALS. PHOCÆ.

Seals, like other mamiferous animals, are provided with four limbs, though nothing but their extremities appear externally, being covered by the integument of the trunk, the fore-limbs to the wrist, the hinder to the heel. The digits of the fore-feet are successively shorter from the thumb, which is the longest. The posterior feet have the lateral digits either longer than the intermediate, or the whole nearly of an equal length. On the upper lip are whiskers: the tongue is smooth and bifid at the tip. The stomach is simple, the cœcum short, the digestive tube long, and nearly equal in size. The heart is formed like that of terrestrial, warm-blooded animals. In their dental system there are three divisions: 1st, those having six superior and four inferior incisors: 2d, with four superior and four inferior: 3d, with four superior and two inferior.

Seals are found on the sea-coasts throughout the world, but principally in the northern regions. They are viviparous, bringing forth and suckling their young on land; they are polygamous and gregarious, living in large families together. They swim with admirable facility, remain for a considerable time under water, and derive their subsistence entirely from the sea. They sun themselves on the sea beach and on ice banks, scrambling upon them by the aid of their flippers, or fore-feet. On land, their motions are awkward and heavy. They are vigilant, intelligent, and tenacious of life.

PHOCA VITULINA. (L.) *The Common Seal.*

This species is found most numerous in high northern latitudes. It has a round head, and an aspect not unlike that of some varieties of the dog, whence the name of sea-dog. The extremity of the muzzle is flat and broad; the posterior part of the head is large, and without bony projections; the upper lip is peculiar, moveable, and extensible, garnished with strong, thick whiskers. It has no external ear, but instead of it, a small tubercle. The fore-limbs are short, and the feet have five digits, joined together by a membrane, having thick, long, black nails protruding from the extremities.

The general color is a yellowish grey, spotted with brown,

or blackish, in various degrees, according to the age of the animal. In advanced age, the color is whiter. The hair is close, and does not point entirely backward. The hairs are, individually, stiff, flat, harsh, and pointed, yet slender.

The powers of vision of the common seal are considerable, though it sees best in a moderate light. Its sense of smelling cannot be exercised to much advantage while the animal is under water. From the manner in which the whole external surface, excepting the end of the nose, is covered with hair, the sense of touch would appear to be slight, and the small size of the ears, as well as the manner in which they are commonly immersed, leads to a belief that this organ also is not very acute. Notwithstanding these defects, the seal is capable of some education, learns to distinguish his feeder, and to perform various actions when commanded.

While engaged in feeding, the aspect of the seal is very different from what it is when the animal is quiescent. The upper lip is thickened and projected forward, the bristles or whiskers fiercely erected, and the nostrils dilated and closed with force. They feed and swallow under water with as much ease as in the air, but in a different manner. Under water they open their mouths but partially, and lower the under jaw, while they separate the lips at the extremity, apparently drawing in the prey by suction.

In a state of captivity the seal is not timid, avoiding neither men nor animals, unless closely approached. They are not inclined to bite or injure persons, as long as no attempt is made to touch them with the hand, or otherwise disturb them; but if annoyed, they snap fiercely, and strike with their flippers. Their characteristic vigilance never appears to desert them for a moment.

The common seal brings forth two young in autumn, and suckles them on shore till they are six or seven weeks old, when they are gradually accustomed by their parents to frequent the sea. At this period, they are of a whitish or light fawn color, covered with soft or woolly hair, and when in distress have a sort of whining voice. Seals are mostly associated in families, consisting of a few males and a large number of females and young. They are fond of landing on the sea

beach, ledges of rocks, or ice-banks, for the purpose of basking in the sun; and in fine weather prefer remaining on the ice to being in the water.

The seal is extremely vigilant, and whenever a herd of them visit the shore, some are always on the watch, and one, when alone, is very frequently observed to raise its head to discover the approach of enemies. Should they be on a large field of ice, they are careful to secure a retreat, by keeping near the edge of it, or keeping a hole open in the ice before them. The old ones are peculiarly distrustful; the largest crowd of them instantly disperse at the approach of a boat.

The food of the common seal is fish, crabs, and birds—which last it catches by rising under them and seizing their feet before they are aware. Feeding on much the same food as some whales, the latter are not found where seals are very abundant.

That part of the arctic seas where seals most abound is in the vicinity of Jan Mayen's Island.

PHOCA CRISTATA. (L.) The Hooded Seal.

This seal is most commonly found on the shores of Greenland, of Davis' Strait, and occasionally of Newfoundland. The species is very obviously distinguished by the singular appendage it has on the head, formed by an extension of the skin of the front, which communicates with the nostrils, and can be inflated or elevated and depressed at the pleasure of the animal. The size of this hood, which extends from the end of the snout to five inches behind the eyes, is twelve inches, and its height nine. Through the anterior part of this hood the nostrils open, each two inches in diameter; and when the hood is not distended, the cartilaginous partition of the nose may be felt from the outside, rising about six inches at its greatest elevation. Internally the hood is strongly muscular: externally it is covered with short, bright, brown hairs.

The use of this curious structure is unknown. Perhaps it may be intended to protect the eyes; but other seals, that live in circumstances of equal exposure, have no such defence.

The hooded seal is seven feet long, from the centre of the chin to the root of the tail, which is six inches and a half long,

and three broad at its base. The body is cylindrical, gradually decreasing to the tail, which is flat, and tapers to a point; and the whole skin is covered with flat hairs about an inch in length. The color is grey and dark brown. The head, when the hood is not distended, appears small, compared with the body, and the eyes are large and of a dark greenish hue. The orifices of the ears are like those of other seals.

The flippers are like those of the common seal, but appear small in proportion to the size of the animal. Each digit is furnished with a strong, compressed, channelled claw. The hinder paws are of the same length as the flippers, and lunated at their extremities, which are fifteen inches broad when expanded. They have five depressed claws. The teeth are thirty in number; above, four incisors, two canine, and ten jaw teeth; below, two incisors, two canine, and ten jaw teeth.

PHOCA CARBATA. (Mull.) *The Great Seal.*

This seal, which grows to the length of ten or twelve feet, is found in the Greenland seas, and on the northern extremes of this continent. It commonly rests on floating ice.

Its skin is about half an inch thick, and is covered with black hair, which in summer is almost entirely shed, leaving the animal bare. The whiskers are long, pellucid and white. The middle digits of the fore-feet are longer than the others, which in relative length are like the fingers of the human hand.

The great seal breeds in the month of March, having a single cub, usually upon the ice among the islands; it approaches the land more closely at that season than at any other. In habits and general appearance it resembles the common seal.

PHOCA GRÆNLANDICA. (Mull.) *The Harp Seal.*

The harp seal measures from six to nine feet, from the tip of the nose to the end of the tail, which is from five to seven inches long. In circumference, at the thickest part of the body, it is from four to six feet. It has a round head and high forehead, with a short nose and large black eyes. No seal varies its color so much as this.

The harp seal is common in the Greenland seas, where it frequents the deep bays, migrates twice a year, going in March,

and returning in May, and again in June to return in September. The breeding season begins in July, and the female has one cub near the end of March, or in the beginning of April, which she suckles on fragments of ice remote from land.

The harp seal is incautious, and has much of the frolicsome disposition of the common seal. This species lives in great herds, that swim apparently under the direction of a leader, who watches over the safety of the whole. They do not frequent the fixed ice, but the floes. This seal has a large quantity of blubber, which yields a larger quantity of oil than is obtained from any other seal.

PHOCA FÆTIDA. (Mull.) *The Fetid Seal.*

The fetid seal, when full grown, is four feet and a half long. The hair does not lie smooth, but is rough and similar to that of a pig. The old animals are very fetid, and their nauseous odor taints their flesh and fat equally.

The head is short and rounded, the snout forming a third of its length. The eyes are small, the iris brown. In other respects it is like the common seal. It frequents the ice near frozen land, and never leaves its haunts when old. It is solitary in its habits, pairs being seldom seen together. It is not a timid animal, and often falls a prey to the eagle, being taken while asleep on the surface. Its fetor does not hinder the Greenlanders and Esquimaux from eating it.

PHOCA URSINA. (L.) *The Ursine Seal.*

This is a large animal, being, when full grown, eight feet long and five in circumference, and weighs about eight hundred pounds. The female is much smaller than the male. The anterior part of the body is thick, the posterior slender, and tapering to the tail.

The ursine seal differs from most other seals in having the anterior limbs entirely at liberty, or not covered by the integument of the body. The wrist, bones of the palm, and digits, are covered with a naked skin. The thumb is the longest of the digits, which decrease in length successively to the little or external one. All of them have a small nail. The posterior extremities are twentytwo inches long, and articulated like

those of other seals, but, owing to their length, can be used to scratch the head. They have five toes, united by a web, which, when spread, gives a breadth of twelve inches. This species is principally found on the islands between America and Kamschatka, where they lie on the shores in vast herds, each male having from eight to thirty or more females.

THE WALRUS, or MORSE.

These animals resemble seals in the form of their bodies and anterior extremities. They have a round head, small eyes, and no external ears. The orifices of the nostrils are far distant from the upper lips. The posterior feet are horizontally placed, and have five digits, of which the two external are the longest—all provided with small incurvated nails, and connected by a membrane. The most striking peculiarity of the genus is the tusks, or prolonged canine teeth, which descend from the superior maxillary bone and project far below the lower jaw, serving the animal as offensive weapons, as well as in climbing on ice-banks, &c.

The walrus is found on the shores of the islands between America and Kamschatka, about Spitsbergen, and on the coasts of Hudson's Bay and Davis' Straits. It attains the size of an ox, being, when full grown, from twelve to fifteen feet in length and from eight to ten in girth. The skin of the walrus is about an inch thick. The hair is short, and of a yellowish brown color.

On land the walrus is a slow, clumsy animal; in the water its motions are quick and easy. It is a fearless, and, when not disturbed, an inoffensive animal. The ivory tusks are from ten to thirtysix inches long, and have been known to weigh ten pounds. The circumference of one twentyseven inches long, is about eight inches at the base.





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